

Australian

SEPTEMBER/OCTOBER 1978. ISSUE 92. Vol. 8 No. 11

Indevs 90c*

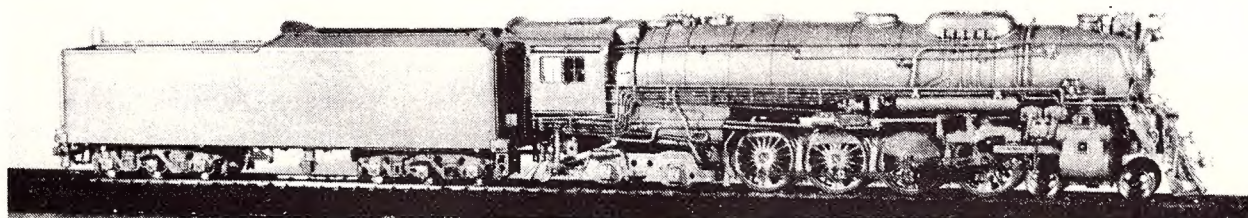
MODEL RAILWAY

Magazine



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NEW MOTIVE POWER.... — NOW ON THE 'READY TRACK'



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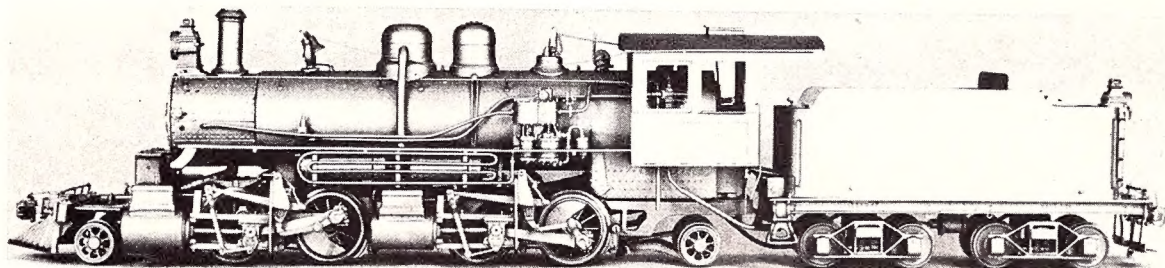
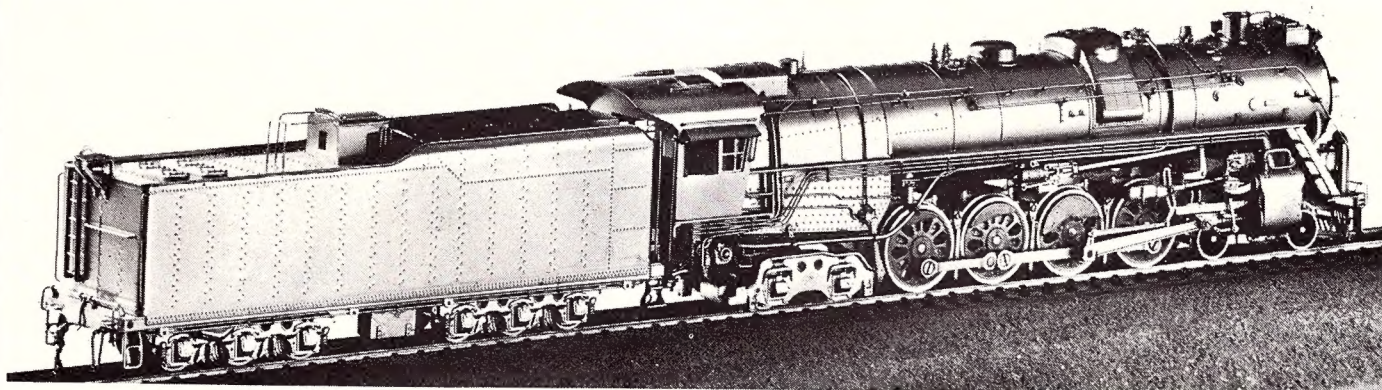
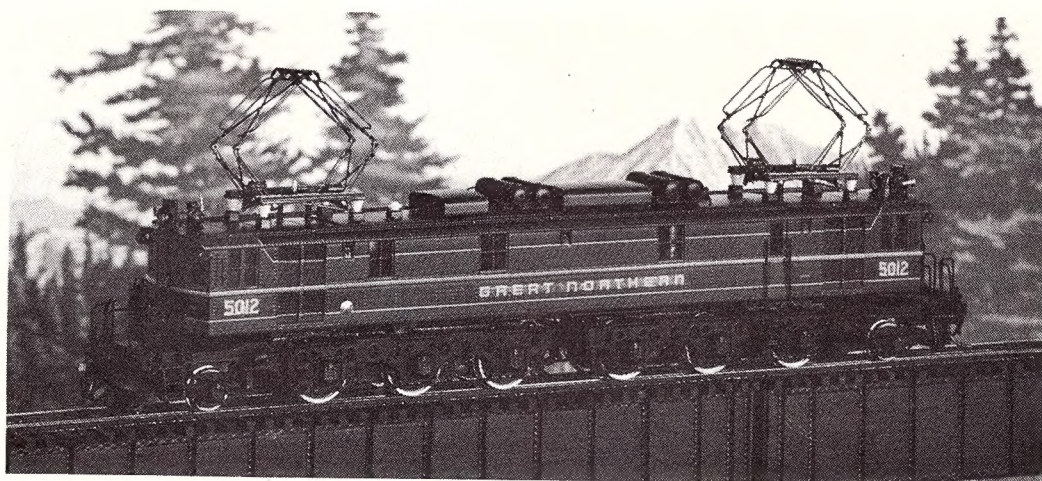


Photo of pilot model.

'O' GAUGE LITTLE RIVER R.R. 2-4-4-2 ARTICULATED LOGGING LOCO & TENDER. FROM THE SHOPS OF
CUSTOM BRASS. PRICE: \$1665.00

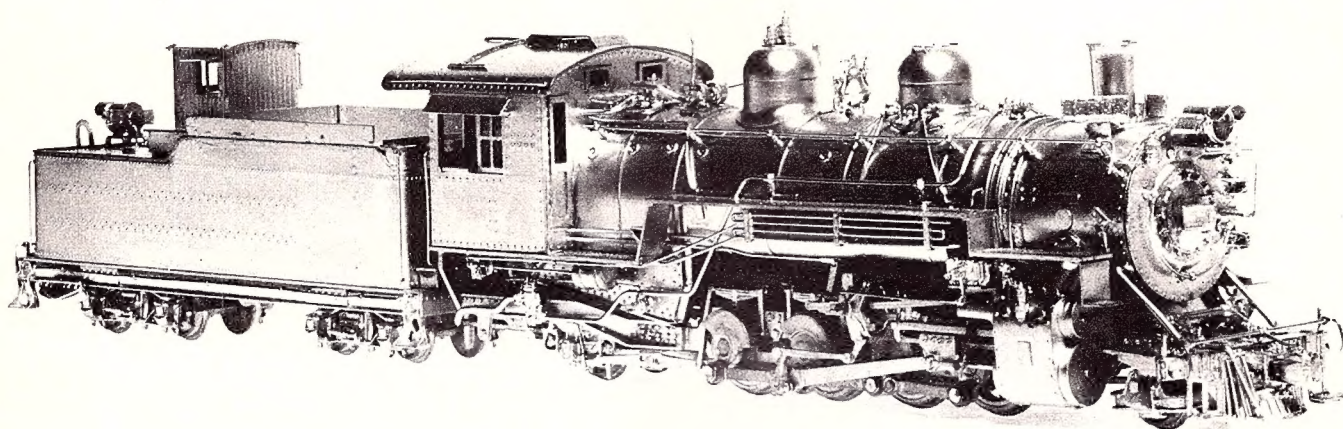
G.N. 'Y-1' 1-C + C-1
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HO SCALE.
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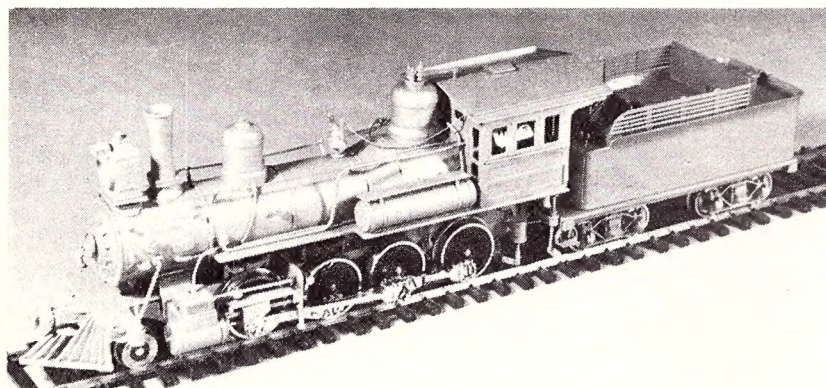
FROM FUJIANA IN HO SCALE . . . THE MISSOURI PACIFIC '2200' SERIES 4-8-4 LOCO. & TENDER. PRICE:
\$816.00

SOLE AGENT & IMPORTER
THE MODEL DOCKYARD PTY. LTD.
216-218 SWANSTON ST. MELBOURNE. PHONE: 663 3505

NEW MOTIVE POWER.... — NOW ON THE 'READY TRACK'



THE FANTASTIC HO_{N3} D. & R.G.W. 'K-36' 2-8-2 LOCO. & TENDER, BY FUJIANA. OUR VIEW SHOWS THE PILOT MODEL. PRICE: \$548.00.



ALWAYS AN INTERESTING ROAD TO THE SHORT LINE ENTHUSIAST, THE COLORADO MIDLAND FEATURED THESE FINE TURN OF THE CENTURY CLASS '115' CONSOLIDATIONS. NOW AVAILABLE FROM HALLMARK, IN HO GAUGE. PRICE: \$186.65

Other News from the Dockyard...

New, large stocks of Floquil Paints are now available. For full details, see our HO Fittings Price List @ 95c per copy (30c extra, posted) . . . Con-Cor HO scale 1926 vintage Mack Truck Kits are now available. The range comprises: Coal Truck, Stake Body, Van Body and Oil Tanker, all @ \$5.60 each . . . Further stocks of the popular Sekisui N scale J.N.R. 'C-62' 4-6-4 Hudson Locomotive are now available through all our stockists for the Sekisui/Con-Cor line. Recommended price is \$61.25 each. Also available are further supplies of the equally popular American type freight car series. Many of which have long been out of stock, or in short supply . . . For traction fans working in HO scale, deliveries during the second half of 1978 are expected to include the Galveston-Houston 'Bluebird' Interurban and P.E. 5050 Series 'Hollywood' Cars. The latter in both Motor and Trailer. Also coming are the North Shore No. 410 Observation Trailer, No. 410 Motor Coach, No. 420 Observation Trailer and No. 420 Motor Coach . . . From Kumata, about August/September, we expect to have the HO C.N.R. GP-40 and GP-40-2 Diesel Locomotives. . . The following models were received in June/July deliveries: Custom Brass' On2 S.R. & R.L. No. 15 Combine @ \$164.00 and No. 8 Baggage Car @ \$206.95. HO C. & O. 'L-2' Class 4-6-4 @ \$227.00 and 'C.B. Royale' quality HO N.P. Class A 4-8-4 @ \$423.00. Key Imports' HO D. & R.G.W. '583' series 2-8-0 @ \$193.65 and HO A.T. & S.F. '1226' series 4-6-2 @ \$254.00. Alco Models' 0 gauge P. & L.E. Steel Bay Window Caboose @ \$69.00, New Haven 'NE-5' Series Steel Caboose @ \$69.00 and P.R.R. 'N-6A' Series Wood Caboose @ \$69.00 . . .

Recent indents have included, extensive replenishments to our range of nuts, bolts, taps and dies. For full details, including our range of fine tools, see our Model Engineers' Price List @ 95c per copy (20c extra, posted) . . . About the time these notes appear in print, Custom Brass are expected to deliver the P.R.R. 'HC-1s' 2-8-8-0 Loco. & Tender, in HO scale . . . Shinohara's Code 70 N Scale Track range will be further expanded with the addition of 30, 45, 60 and 90 degree Crossings. All of which are expected to be available about the end of August . . . The new HO scale G.N. 'L-1' 2-6-2 Loco. & Tender will be coming from Tenshodo in the August/September period . . . Further stocks of Aster No. 1 gauge live steam locomotives and rolling stock are now available. Including the new Logging Car. For details, see our Model Engineers' Price List, referred to elsewhere in these notes . . . Sekisui/Con-Cor N scale 50' Modern Grain Car and 40' 3-Bay Hopper Cars are now available through all our stockists, in a variety of road names. Whilst many other car types, long out of stock, are again available in a wide variety of heralds. Also to hand are the 2-8-2 Mallet Locomotives in both G.N. 'Glacier Park' and U.P. heralds . . . Realism never before available in HO_{N3} now comes in the new Rail Line D. & R.G.W. '3000' Box Car Kit, supplied less decals and trucks. The car body is of one piece die-cast plastic construction, with most of the detail molded on. Doors slide and the roof walk is an integral part of the body. First stocks due in August . . . Overland Models have now delivered the HO scale Burlington 4-8-2 'B1A' series Loco. & Tender, at the most reasonable price of \$219.00!

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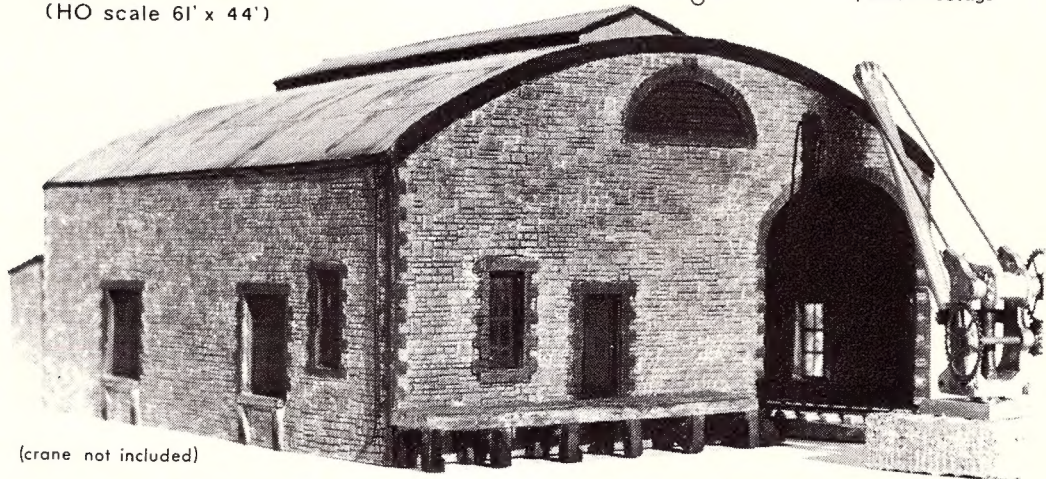
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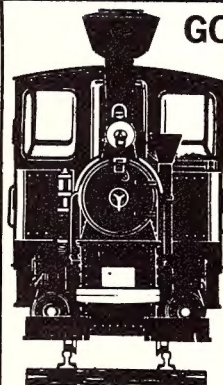
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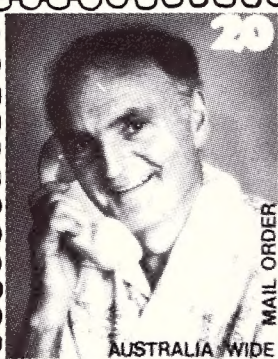
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LOCOMOTIVES, PASSENGER & GOODS ROLLING STOCK

19th Cent. American Locomotives

by John H. Thomas

In 1825 the world's first public railway to use steam traction was opened. This was the Stockton and Darlington Railway in England and its first locomotive was George Stephenson's "Locomotion No. 1".

With the Rainhill Trials on the Liverpool and Manchester Railway from 6th to 14th October in 1825 it was established that the steam locomotive was a reliable form of traction that could do all that was expected of it. From the time of the Rainhill Trials until it was superseded by diesel-electric and other forms of traction in the 1950's and 1960's steam reigned supreme on the world's railways.

The 1830's through to the 1870's saw the establishment of railways in most countries of the world.

"In Europe the country built the railroads; in America the railroads built the country". This anonymous statement is literally true and it explains the differences between American railroads and those of the rest of the world. In England where railways first began the early railways used expensive methods of construction that were made to last with as few hills and curves as good engineers could make possible. In America the reverse was true. The main thing was to get the tracks down as quickly and cheaply as possible and hope that traffic would build up enough to make the line profitable. Most American track followed the contour of the land with many sharp curves to avoid grades. When hills couldn't be avoided the tracks went more or less over them and in places sometimes running up and down like a roller coaster.

The first railways in America, like those in England were built, not for steam traction, but for horse or gravity traction or both. By the 1830's railroads were springing up all over the country and by 1840 some 3,000 miles of railroad were in operation throughout the U.S.

During the 1840's and the 1850's the American railroads acquired the characteristics which were to distinguish them from those of the rest of the world.

By the early 1840's the Americans had developed a locomotive type which was to become known as the "American" or "American Standard" type. The first of these American 4-4-0 locomotives was completed in May 1837. The "classic" American 4-4-0 with 'three-point' suspension first appeared in 1839. By 1870 about 85% of the locomotives in use in America were of the 4-4-0 type and between 1840 and 1890 about 20,000 of them were built. The development of the American type was a direct result of the light, rough and crooked American track. The English type locomotives with their rigid wheel bases were found unsuitable on the uneven track.

The first American 'national type' engine was built at the order of John B. Jervis in 1832. This 4-2-0 loco was the first bogie locomotive in the world. The type was

improved by the Norris Brothers and between 1835 and 1842 the 4-2-0 type represented nearly two-thirds of the locos in use in America.

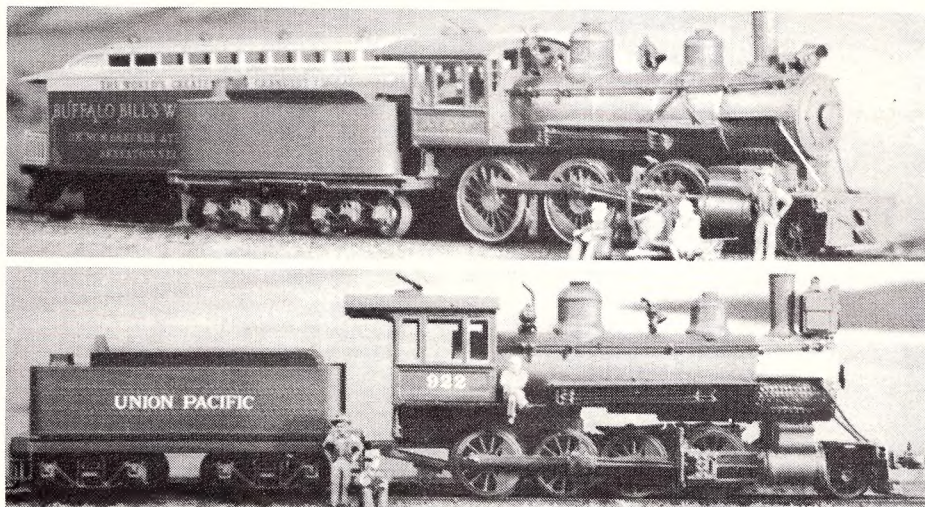
The most distinctive features of the American loco, the bell, the pilot (cowcatcher) and headlight are due mainly to the hasty construction of the early American railroads and the wide open spaces traversed. Early railways were unfenced and the railways were usually crossed at grade (level crossing). Livestock and people walked along the track as they liked and the railroads, not as in Europe, the owner, were liable if a trespassing animal was killed or injured. The first locomotive fitted with a pilot was the "John Bull", originally a "Planet" type locomotive built by Robert Stephenson & Company in 1831 at Newcastle upon Tyne.

Bells were first fitted to locomotives when the State of Massachusetts passed a law requiring the fitting of a warning device. Locomotive headlights were another necessary innovation. Originally no American locos ran after dark. As railways lengthened it became increasingly difficult to avoid operation after dark. An early attempt to light up the track ahead was made on the south Carolina RR about 1833 when Horatio Allen lit a bonfire on a flat car which was pushed ahead of the loco. In 1840 the Boston & Worcester fitted a loco with a real headlight with a reflector behind the light and by the 1850's a box shaped headlight with a tin reflector and a whale oil lamp was in more or less general use. By the 1870's huge box shaped headlights mounted on ornate brass scroll brackets were in vogue.

The huge balloon or diamond stack which distinguished many American locomotives of the 19th Century was not just a designers whimsy. The early locos had been designed to burn coal but as the railroads spread out and coal was not in abundant supply most locos were wood burners. The shape of these large smokestacks was the result of the screens and spark arresting devices built into them.

During the period American railroad engineers had several world's firsts. The world's first 4-6-0 came along in 1846. The first true "Mogul" type 2-6-0 was built in 1860 following the invention of the Bissell two-wheeled truck in 1858. The first 12-coupled engine was a 'camel' type from 1863. The first regular 2-8-0 named "Consolidation" was designed in 1865 and gave its name to a type which was to become one of the most popular in America. Other popular types to make their appearance before the end of the 19th Century were the 4-6-2 "Pacific" in 1886 and the 4-4-2 "Atlantic" in 1888.

The locomotives shown below are typical examples of the American locomotive builder's art in the latter part of the 19th Century.



ROUNDHOUSE

HO/OO

KIT FOR OLD TIMER 2-6-0 MOGUL WITH COAL TENDER \$55.00

A model of a Baldwin locomotive built during the 1880's

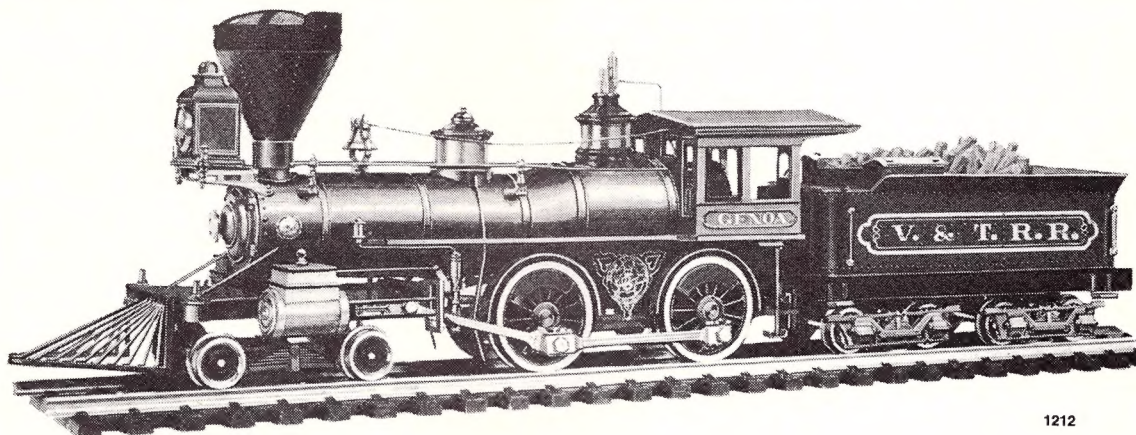
490 Undecorated 493 Southern
491 Baltimore & Ohio Pacific
492 New York Central 494 Santa Fe

KIT FOR 2-8-0 CONSOLIDATION WITH COAL TENDER \$59.95

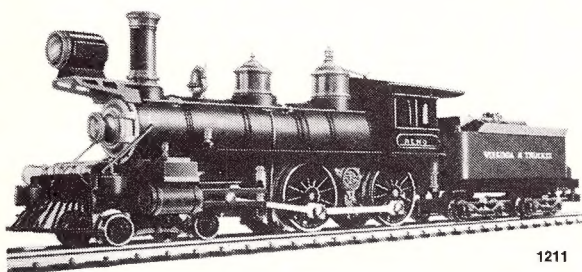
A model of another Baldwin locomotive of the 1880's

480 Undecorated 484 Union Pacific
481 Southern Pacific
482 Santa Fe 485 D. & R.G.
483 Pennsylvania

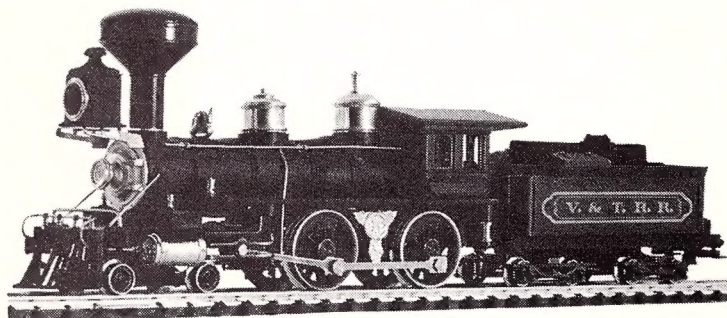
19th Cent. American Locomotives



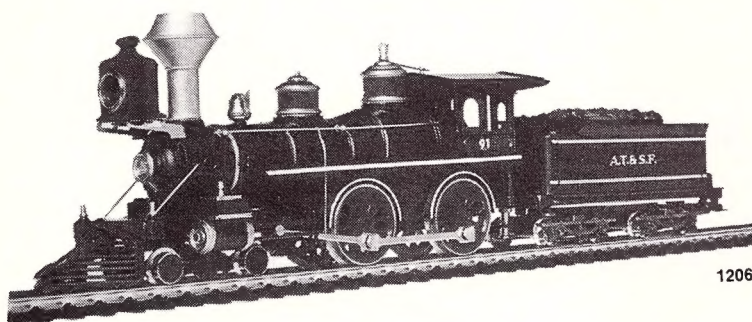
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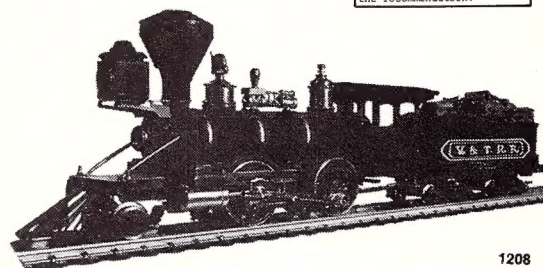
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1207



1206



1208

Prices in this advertisement are recommended prices only and there is no obligation for dealers to comply with the recommendation.

RRIVAROSSİ HO/OO

- 1206 Old timer 4-4-0 locomotive with tender, No. 91 of the Atchison, Topeka & Santa Fe in the original colours. This loco is typical of the locos built in the 1870's... \$4975
- 1207 Old time 4-4-0 locomotive "Inyo" of the Virginia & Truckee. Its name is derived from one of the towns served by the railway. The model is 200mm long. ... \$4975
- 1208 American 2-4-0 locomotive "J. M. Bowker" as built by Baldwin in 1875 for the Virginia & Truckee Railroad. Length 180mm ... \$3995

- 1211 HO scale reproduction of the American Locomotive "Reno" built in 1873 by the Baldwin Works for the Virginia & Truckee. This loco was also named for a town served by the railway. ... \$4975
- 1212 Detailed scale model of the "Genoa" 4-4-0 loco built by Baldwin for the Virginia & Truckee in 1873. Length 200mm. ... \$4975

Suitable rolling stock and old time passenger cars for use with the abovementioned locomotives are available from both the Rivarossi range and the Roundhouse series of kits. For further details see AMC Price Lists Series "R" - Rivarossi and Series "Q" - Roundhouse.

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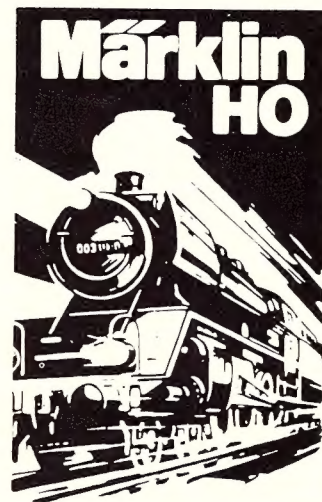
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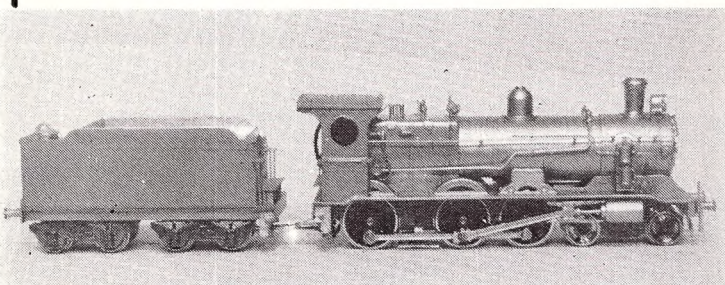


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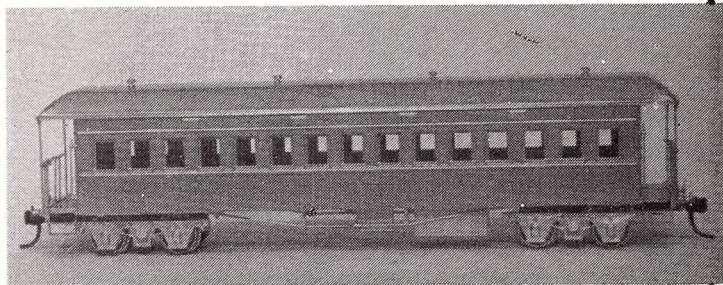
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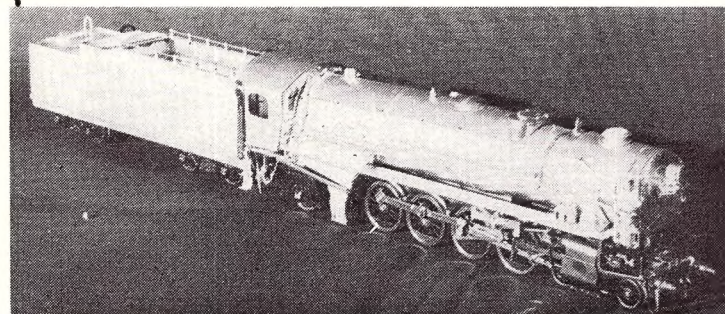
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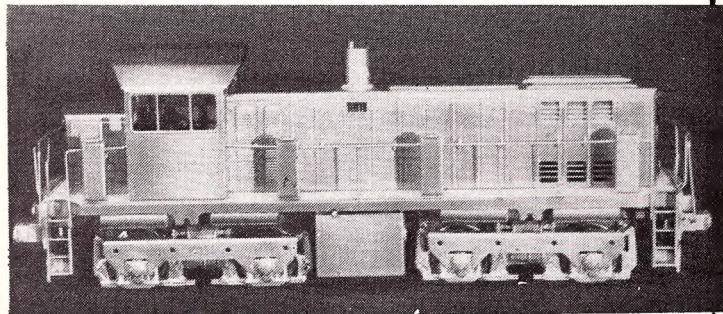
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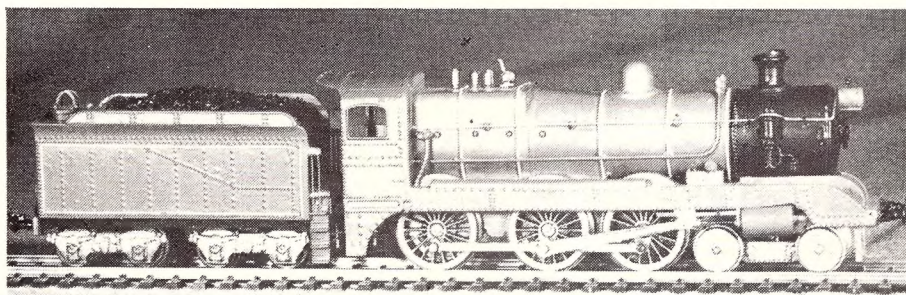
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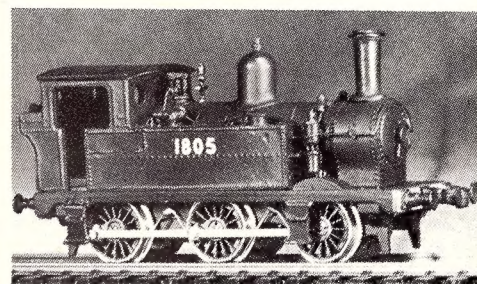
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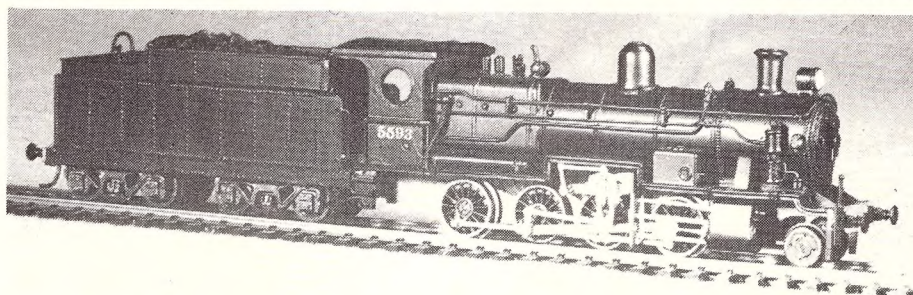
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September/October 1978
Issue 92. Vol. 8 No. 11
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COMMENT

It is 10 years since I changed from American to Australian prototype and the more I think of it the more I'm convinced it was an unwise decision. Granted, I've learned a tremendous amount so far as scratchbuilding is concerned, but what's the use of scratchbuilding a stack of vehicles if there's no reliable locos available to pull them.

Brass locos are a costly investment. Their fidelity is often subject to debate, and their operating characteristics more than not leave a lot to be desired. Unfortunately, I have now reached the stage whereby I no longer wonder how much a proposed new model is going to cost but how much work will have to be done on it to make it relatively accurate. My enjoyment of the hobby is not derived from the purchase of possible ready-to-run "brass kits", sorry! Sure, I've got brass locos, but when only 4 out of 12 operate satisfactorily I feel that these odds are enough to discourage anyone. No doubt with a fair amount of work (re-motoring, improved pickups, etc.) the others can be got to run correctly, but with the price of brass models what it is nowadays, why

should this have to be?

Next in line for loco availability is from the local "cottage" industries. Yet even these kits must be presenting some assembly problems, else we would see a profusion of them on layouts at exhibitions.

It would appear that if we want reliability we must resort to the commercial plastic manufacturers. The only problem with this source, though, is the limited number of different types of models available. One cannot successfully operate, say, a NSW orientated layout solely on 44's and 38's. It will be interesting to see what the future holds in this respect.

People say that, if this is the way I feel, why don't I scratch-build my locos. Easy! I don't want to; it's not my thing.

It is becoming more and more obvious on my layout how the Australian equipment is disappearing and American equipment is taking its place. I may not be getting exactly what I want, prototype wise, but at least I am getting reliability at reasonable cost and a sufficient variety of locos to do the different facets of operation I best prefer.

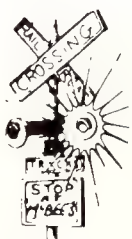
These opinions are purely mine, and not those of this magazine — actually they conflict. Nonetheless, for what they are worth, I throw them open for general comment.

Allan Brown.



Fitter A. Brown with his 19 lb hammer repairs the couplings on 4465. Photo by Graham Ball.

ON THE COVER: CR narrow gauge NM34 in Pichi Richi Pass bound for Port Augusta in October 1962. The NM class was hauling the ARHS "Pichi Richi Pathfinder", the first of several enthusiast trips through Pichi Richi in the early 1960s.



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ON THE AUSTRALIAN SCENE

Featured elsewhere in this issue is a photograph of what we consider to be one of the finest Australian kits produced in the last few years. It is a craftsman type kit (in the style of Manguson Models US kits) of an S.A.R. or C.R. style stone Goods Shed. The kit features some wood parts but is mainly cast epoxy. At the Duty Free price of \$11.95. We also stock the MnJ range of Australian Decals. All priced at \$1.00 a set. The range includes: VR, QR, SAR, Commonwealth symbols, wagon details etc. Full listing is available on request.

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Last year we advertised (for the first time) that we were able to supply the Walther's HO Catalogue — and offered a service to import any item featured in it. The catalogue and import service both proved very popular — the catalogue embarrassingly so. In fact despite what we thought was an optimistically high order we sold out and many customers had to miss out. The 1979 edition should arrive in Australia late December or early January. Anyone interested in obtaining a copy of this superb catalogue (and hopefully ordering items from it through us) is invited to write and reserve a copy NOW. Price is unknown but should be in the \$4.00 to \$5.00 region, plus postage.

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PLIOBOND 50 ml tube	tube	\$1.15
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(PLIOBOND is the adhesive suggested by Clive Huggan in his series of articles in AMRM on track laying.)		

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10.5 mm dia. 8 spoke	pk.	70c
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CAVALCADE Wheel sets have steel axles, pin point bearings, steel tyres and plastic centres. Each pack contains 4 wheels mounted on 2 axles.

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Figure in bracket indicates number of pieces per package.

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All are priced at \$1.65 per package.

For example, 1 package of 00-90 round head, 3/16" long brass screws contains 20 screws and costs \$1.65.

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mounting their N Gauge couplers while 2-56 is the size for HO.

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FARRER

We have seen the results of Terry Clarke's work by way of his Australia N series. He now couples it all together and shows it to us . . . as his layout. All photos: Bob Gallagher.

This is a "display" layout, I stress that word against exhibition layout as the darn thing is virtually "plumbed-into" the room and is unfortunately not removable. The track plan was drawn at the planning stage, but the photographs show it has been followed fairly accurately.

"Farrer" is not a prototype layout. It is based on N.S.W.R. practise and is supposed to be somewhere on the main south between Junee and the border, i.e. the single track section. The station buildings come from Table Top, the signal box from The Rock, the silos from Brochlesby and the goods shed from Ian Thorpe (the bloke not the station). The yard crane is from Nowra and the signals

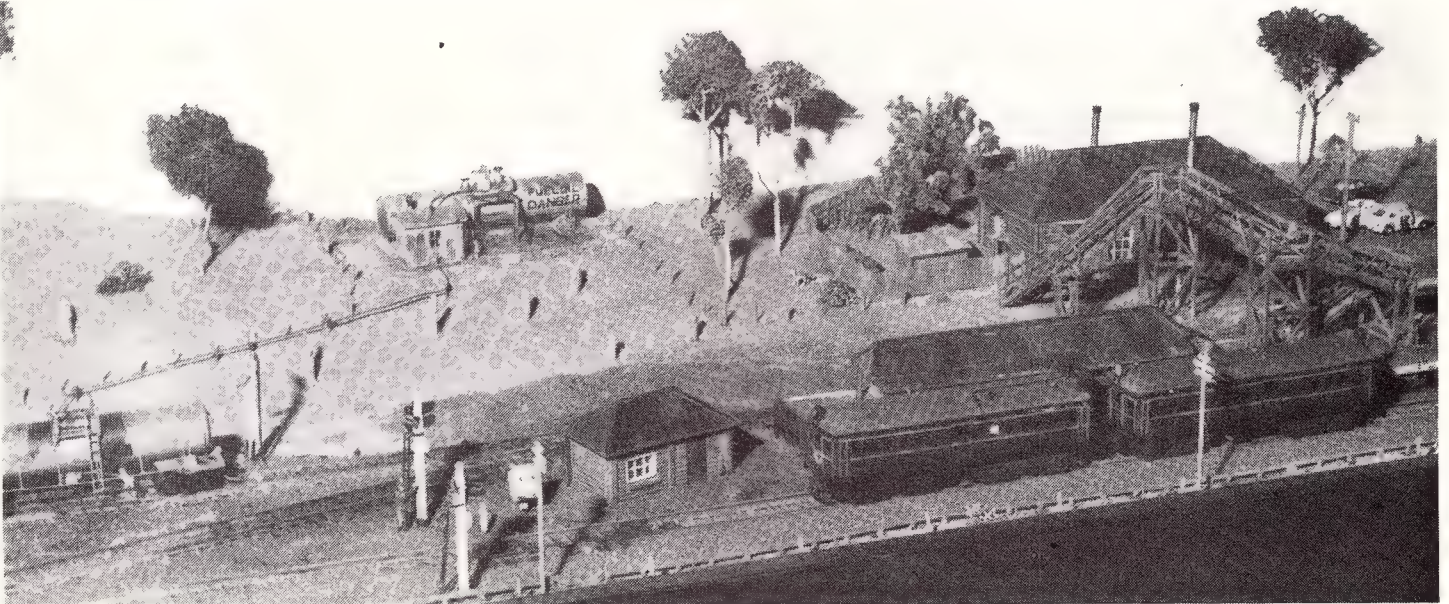
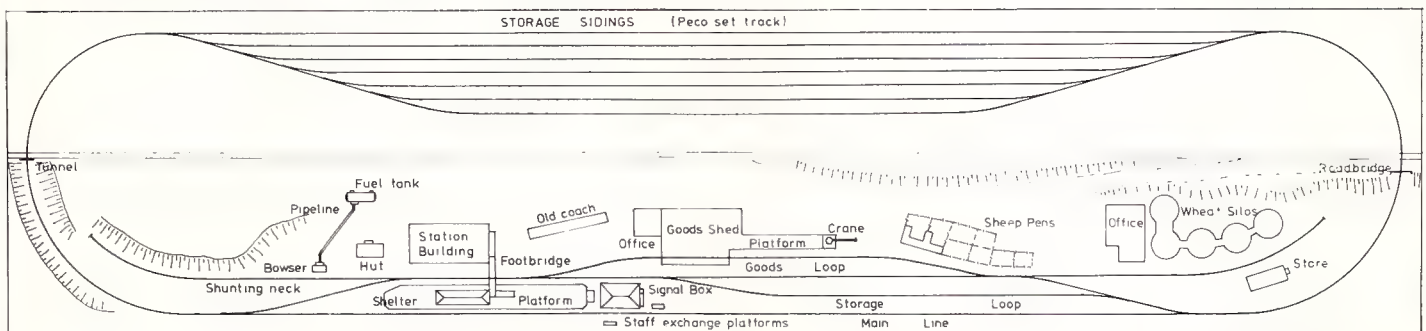
are commercial Japanese ones modified to look vaguely like NSW; they are only temporary pending replacement with working semaphore ones.

The construction is as follows:- 1/2 inch pyneboard with a 2 x 1 hardwood frame underneath, there are 7 cross frames of 2 x 1. On top of the pyneboard is 1/2 inch canite. The back and sides are 3/8 inch pyneboard as well as the false back-scene. The tope which is hinged along the back is a light framework of 1 x 1 covered with veneered plywood. The exposed front of the unit is covered with 1/4 inch meranti, which together with the top, has been stained and polished. The front of the layout is protected by a 1/8 inch sheet

of perspex which is screwed to the top, so that it hinges up when the top is opened. Thus the whole layout is totally enclosed to keep dust and little fingers out, much to the frustration of my young son.

Track and pointwork: is all commercial Peco. It was spiked down loosely then ballasted with fine sand. When the glue had set the pins were removed so the track is held in place by the ballast. The points on the front are all Peco medium radius with point motors beneath the baseboard. The points in the hidden fiddle yard are Peco set-track 9" radius with point motors mounted above the baseboard.

. . . . Would use Shinohara track exclusively if I were to rebuild the layout, as with all



The Tin Hare (CPH 1) waits for the signal to depart Farrer on its return run to the border at Albury.





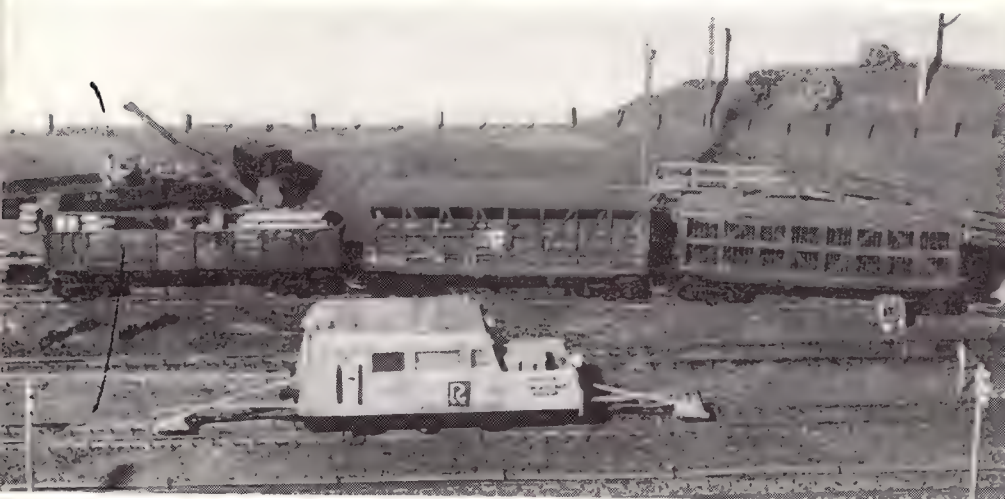
4472 passing through with a train of tank wagons.



42107 trundles a long interstate freight southwards through Farrer.



44225 passing Farrer wheat silo.



The Matisa track inspection vehicle surveying a siding at Farrer. This is built on a Fleischmann track cleaning loco chassis and really does a terrific job of cleaning the track. It is a must for a totally enclosed layout.

Kadee wheels I found that the Peco was inside correct gauge.

Scenery:— was built up on styrofoam then Polycel for the final contour. Zip-texturing, straight from the American book, was used. All gum trees are lichen on twisted wire. Of course, being Australia, there are plenty of dead trees on the layout. Wattle trees are cut down commercial pine trees given a coat of yellow paint. Telephone poles are Wiad slightly modified, whilst the out of scale SN moulding poles are used as power poles. The transformer on the power pole near the silos is scratchbuilt. Vehicles are Viking and figures are Merten. Point rodding is 0.3mm square section styrene. Fence posts are styrene for the square ones and head-less pins for the remainder. The fuel tank is an old tank car. The footbridge is the one and only attempt with styrene — too fiddly to make another. The tunnel portal is from the Bethungra spiral and the overbridge is scratch-built from an article in AMRM many moons ago.

The whole layout resides upon a set of two foot deep cupboards and the controls are located inside the two centre drawers whose fronts hinge down to reveal the panels.



Farrer station buildings and passenger platform.

Common return wiring is used for the tracks, whilst a separate common return is used for the signals and another for the point motors. Separate transformers power the signal lamps off of 4.1v a.c. and 15v a.c. for the point machines. All points are push-button operated and a simple system of signal interlocking is used so that conflicting signals cannot be set up. The signals are not interlocked with the traction supply so that, like the prototype, a "driver" can run through a red light! Internal cabinet illumination is provided by two 8W fluors hidden inside the cabinet top and controlled from the main panel. I will not attempt to explain the electrics as there are 120 cables from the panels to the baseboard and, as I am in the electronic profession, it is rather more complicated than the average layout, especially the track circuiting of the hidden points.

One point, the main traction controller is a straight forward bridge rect to biased transistor type controller. Virtually a Triang P5T with more robust components plus the irritating design fault removed from the P5T. No pulse power is needed. I can control my Mini-trix mechs down to 1 m.p.h. You do NOT need pulse power with well maintained mechs, fully run in motors, good trackwork and good electrical pick-up! I do NOT use any chemical conducting solution on the track, it is kept dry and kept clean by regular running of the Matisa track cleaner.

Incidentally, the name "FARRER" was chosen because of its links with Australian wheat, and the local Federal electorate in which the station is located is also called "Farrer".



4472 passing with a train of tank wagons.



The small goods yard at Farrer. The Matisa is still surveying the track whilst the photograph shows the tail-end of a goods train passing through on the main line. Shown are ARX, BD, BPV, MHG, MLV, HGM, BSC and BSV vehicles.

Figure 7 Parts List

Resistances: For convenience all art ½ watt rating except for LP1 — 15 ohm 10 watt.

Variable Resistances:

- P1 — Slider, linear — SOANAR A5k ohm
R2 — Slider, linear — SOANAR A10k ohm
R5 — Slider, log — SOANAR C5K ohm

Trim Pots: All miniature carbon (Recommended 10k for all positions — APPENDIX B)

Diodes: EM404 (N gauge) For D8 use two in parallel (A bridge rectifier is recommended for D1 — D4)

Switches:

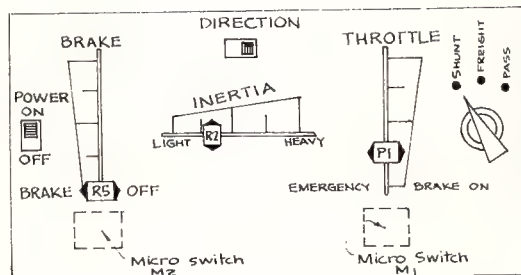
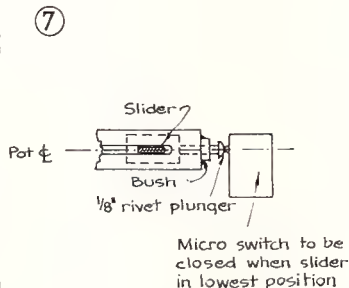
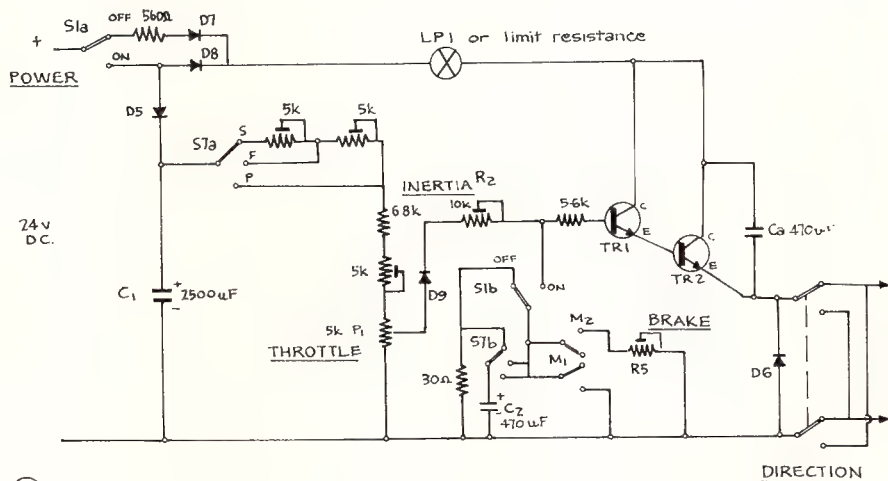
- S1, S3 — DPSO (double pole centre-off) SATO SW59L (paddle)
S7 — Rotary 2 pole, 3 position 'OAK' or miniature KDS
M1, M2 — SPCO (single pole, centre-off) micro switch CSA 7330 V3-101-D8

Transistors:

- TR1 — 2N3053 or BFY52
TR2 — 2N3055 plus heatsink

Capacitors:

- C1 — 2500 micro farad 50 volt
C2, C3 — 470 micro farad 50 volt.



will fall away as it starts the climb. The reverse is also true, it will increase speed on the down hill side. I wonder if this is any different to the prototype where the driver increases or decreases the throttle setting; perhaps doing this on an automatic basis will take some of the art out of driving.

APPENDIX A

MODIFIED THROTTLE — ADDITIONAL NOTES

The design charge rate of the inertia capacitor C2 depends on the quantity C times R, being known as the *Time Constant* for the system. C equals the capacitance in farads and R the value of the in series resistance in ohms. The capacitor will reach 95% full line charge after 3 times the time constant (seconds); thus a 470 micro-farad capacitor with a 20,000

ohm resistor in series will reach a 95% charge level in 28.2 seconds. An acceleration time cycle of this length may seem rather long but research indicates that this is in the right order for most simple throttles. The capacitor reaches 63% charge level at the end of the time constant period.

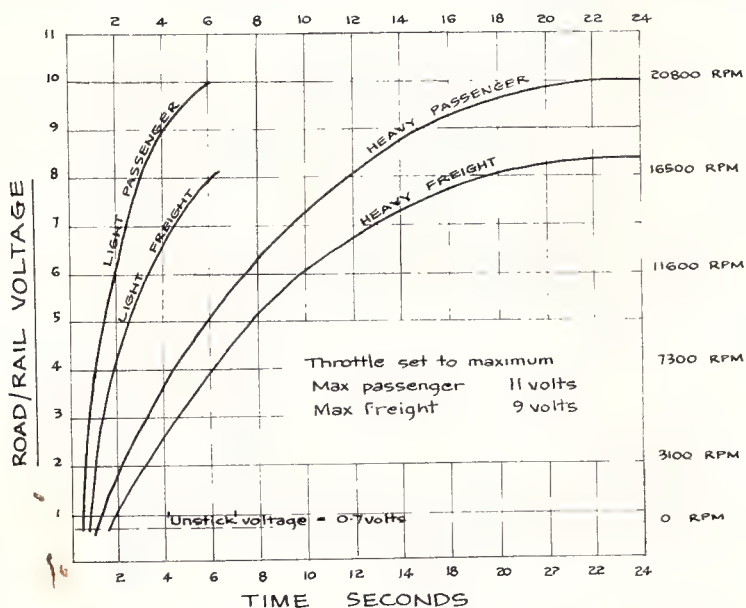
As stated in the main article, I do not actually own a loco, (having resisted the initial temptation to do so) so, much of the initial testing work has been carried out with the 10 year old endurance racing car which is fitted with a Pittman DC196A motor having a top speed (from tests) of 25,000 RPM on 12 volts at a current of 0.46 amps. A second model car capable of 74,000 RPM at a current of 1.27 amps has also been used to test the system. The effectiveness of the slow speed control is shown by the fact that the cars (geared 4:1) could be driven at a rate of 4 feet/minute with no sign of stalling. This is actually a severe test of the system as the motors are of the 3 pole type and the gear trains nowhere-as smooth as the equivalent loco.

In order to gain some idea of the performance of the throttle a series of tests were carried out so that a graph of time versus track voltage could be obtained. This was done with the throttle at its max., setting and for inertia settings of 'light' and 'heavy': the results are shown in Figure 10.

With the added resistances as shown in Figure 6, there can be quite a time delay before the motor actually rotates, the 'unstuck' voltage for the smaller car was 0.7 volts and as shown in the graph the maximum delay was a little under 2 seconds when maximum inertia was in the system. Attempts to delete this from the system by pre-charging the capacitor C2 to a level which did not actually move the unit introduced some undesirable effects for on at least 5 occasions the test car charged off at a great rate, even when the throttle was at its lowest setting — after heavy application of the emergency brake the idea was abandoned.

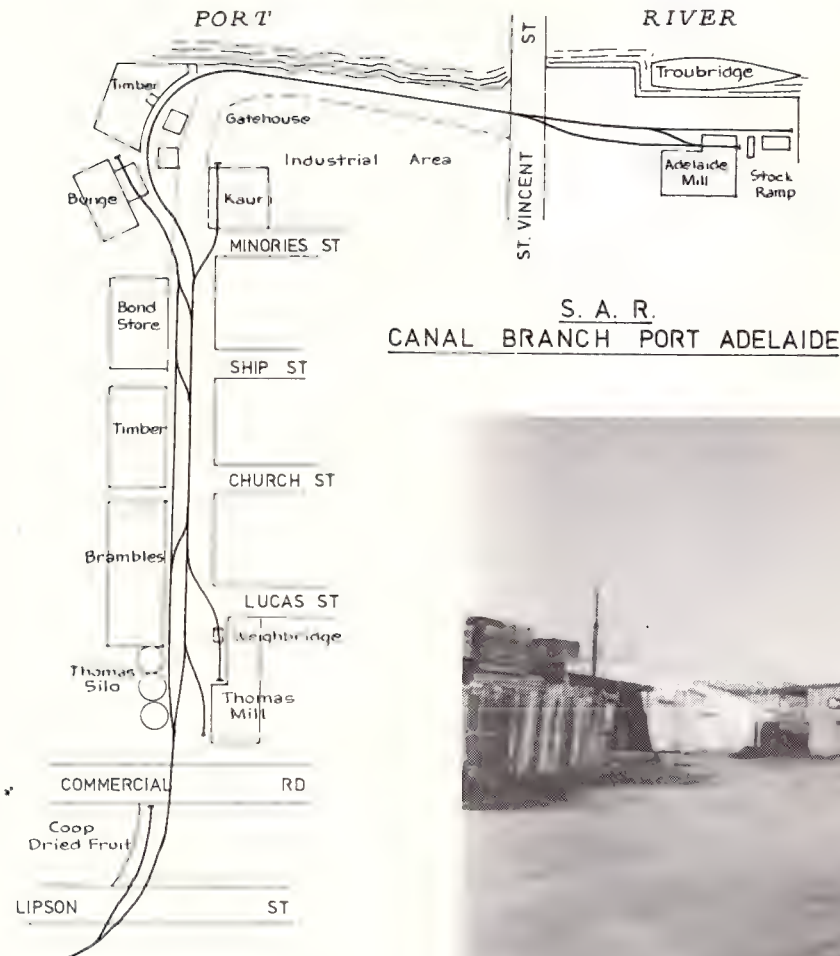
As also stated previously, the setting up of the throttle to give the track voltages for each phase of switch 7 really requires a voltmeter and oval running-in track to be effective. However, one should not be deterred by not having this equipment available, an experienced

Continued on page 27.



AN INDUSTRIAL BRANCH LINE

Harry Green describes the prototype for an ideal industrial layout.



Sinclair Street, Kauri siding on right, Bunge siding and 'main line' to left.

For the modeller whose prime interest is Industrial Sidings and Shunting, no better prototype exists than the Canal Branch of the South Australian Railways at Port Adelaide.

This Branch is approximately one mile in length, about half of which is laid in a public street, serves about eight industrial plants and warehouses and is generally in the shape of a letter 'L'.

Leaving the main Port Adelaide goods yards about three quarters of a mile south of the Old Port Dock Station, the branch turns through 90° and crosses Lipson Street and then Commercial Road at a point just north of the bridge carrying the Outer Harbour Railway Line over these roads. Between Lipson Street and Commercial Road are the premises of the Co-operative Dried Fruit Society, a single story red brick building served by a siding which curves round on the inside of the branch line. This siding leaves the branch just before it crosses Lipson Street and terminates at the edge of Commercial Road. There are four sliding doors in the side of the building facing the siding, these doors are at ground level there being no platforms.

The Branch crosses Commercial Road, enters Sinclair Street and becomes double track. On the right is the large flour mill of W. Thomas & Co., served by two sidings leaving the right hand train in a trailing direction and having facilities for unloading grain from bulk grain trucks. On the opposite side of the street there are a number of circular steel silos used for holding grain stocks. The rail branch runs along the left hand or south side of Sinclair Street, the left side track being close up to the buildings on that side.

Next on from Thomas' round silos on the left side are the premises of Brambles the forwarding agents. The main building is a single



Adelaide Milling Co, showing grain unloading shed and stock ramp.



Sinclair St., Brambles warehouse.



Adelaide Milling Co, looking toward end of track.

story brick structure with wide roller shuttered doors and was formerly used by Massey Ferguson Ltd. At this point there is a crossover between the "Main Line" and the siding by the building. An open timber storage yard is next in line with corrugated iron fence along the rail face. This is followed by the "Sinclair Street Bond and Free Store", a large corrugated iron place with two sliding doors. There is a crossover between the two lines at the beginning of this shed, and another just past it, both in the facing direction from the main line. Both tracks bear to the left at this point, leaving the line of Sinclair Street. The left hand track is a dead-end siding serving the premises of Bunge & Co., Grain Merchants, the "main line" runs behind some sheds and timber stacks, bearing back toward Sinclair Street which it re-joins about 150 yards after leaving it. On the right hand side of Sinclair Street, up to a point opposite the Bond Store, there are no rail sidings at the buildings.

At the second crossover by the Bond Store there is a facing point on the right hand, or "main line" and from this a siding crosses the road and enters the yard of Kauri Timbers Pty. Ltd. The siding lays parallel to Sinclair Street, separated from it by a fence and with cyclone mesh gates at the entrance. Part of this siding has a corrugated iron roof. As the "main line" re joins Sinclair Street after passing behind the timber yard on the left at which there is a small wooden gate-house which looks very much like a small signal cabin or tram shelter.

Sinclair Street ends at the Port River at this point and a roadway at 90° to it runs parallel to the river and the railway also turns to run close to the water's edge. About 300 yards further on the line crosses St. Vincent Street to reach its terminus at the Adelaide Milling Cos' Large Mill, which is directly opposite the roll-on roll-off Wharf used by the M.V. Troubridge which operates to Kangaroo Island and Port Lincoln. The mill is close to the waters edge and is a solid red brick building of five stories and with a "Clerestory" type roof. There are high storage silos at the rear.

Between St. Vincent Street and the mill there is a loop capable of holding 5 standard bogie wagons. From the crossover at this mill end of the loop, the right hand track runs under the unloading canopy at the side of the mill, where there are shutes to take the grain from the rail trucks. Capstans are provided to pull trucks from loop to unloading point and back out to the other track. The left hand track from the crossover runs past the mill for some



Sinclair Street. Thomas Mill sidings on left.

60 to 80 feet, terminating about 20 feet from the edge of the dock. This siding serves a small stock loading ramp which was at one time used to load stock brought from Kangaroo Island, but this traffic is now carried in road trucks brought by the M.V. Troubridge.

Traffic on the branch is handled by two services each day. In the morning loaded wagons are brought in and are distributed around the various sidings as required. The afternoon train is a clearing run to remove the empties and shunt and reposition trucks

not dealt with. Only two types of S.A.R. Diesel Locos are allowed on this Branch, the 500 and 800 classes of Bo-Bo shunters. There is no passenger service.

An interesting variety of goods wagons appear along the branch. Most types of S.A.R. four wheel and bogie open wagons and vans and flat cars used for grain and timber traffic. Interstate vehicles also come in with timber etc. from W.A. and General Traffic for the Brambles Warehouse and Bond Store.

In the Sinclair Street section the roadway

is not paved, in some places the rails stand up above the surface and in others they are almost buried. Along the rest of the line the sleepers are buried in earth or gravel, the loop tracks near the mill are grassy and weed grown. In contrast, the short end portion by the disused cattle ramp has been bitumen paved.

As will be seen from the accompanying track plan, this branch is ideal for modelling as it would fit along two walls of a room or shed and needs only a narrow baseboard.

Sinclair Street, Bond and Free Store.



BULLETIN OF THE SYDNEY MODEL RAILWAY SOCIETY

In this Yardmaster article I would like to talk about design and operation of model railway layouts with particular reference to the club layout. Whilst we should not lose the aim of the club in furthering model railway interest by the transfer of ideas and techniques between members, I feel a more realistic approach to operation would bring more satisfaction to members and suit better our interest in model railroad rather than a toy train approach.

No prototype design has been attempted by the club but the style is basic N.S.W.G.R. of the fifties. Stock used has been of a wide variety basically due to the early beginning of the club when only American — European types were available. I'll agree, on a club layout some licence must be given, but I feel some standards should be set, so I have put down some ideas for members comments.

There has been a lot of articles written in recent times about prototype layouts. Whilst I admit some I have seen are well done I feel that prototype layouts are strictly exhibition types and in fact are easier to make than non prototype. To enlarge on this statement, which may astound some of the more astute modellers, I'll say when modelling a prototype all that is necessary is to use your skill to reproduce in miniature that which is already there. In the non prototype layout locations of building etc. have to also have a reason for their existence, not as in many I have seen just dumped in situ so that there is scenery present.

From this it should be obvious to readers that the builders will need to have a good knowledge of civil engineering and a knowledge of architecture styles in the various periods and regions, as well as a good eye for detail. If these rules are followed a good layout can be produced. Also even a small terminal of prototype style has to be reduced to fit "H0" gauge.

Club layouts again present more problems in design as one requirement is as large a number of operations as possible, which usually means many terminals reasonably close to each other.

The club layout is sufficiently equipped with industries to give cause for various loads, and the timetable used written in broad terms referring to types eg. refrigeration, hopper, stock wagon so as to allow latitude in choosing vehicles. By using these terms both Australian and other types of stock can be used with the same timetable on operating nights without conflict. Other operating points should also be considered such as operating long distance trains between terminals alongside suburban trains.

The club operates timetable with a fast clock to help simulate greater distance between terminals and gives more realistic time to our time table so why then reverse about by operating suburban stock on the same roster. An effort should also be made to help increase N.S.W.G.R. rail stock with emphasis on a period of time when steam and diesel worked side by side. This would allow the intended one night each month all N.S.W.G.R. running nights.



NOTES FROM THE PAINTING FILE

Ross Hurley

Some useful notes on colour mixes and methods of application, recorded when first used, and filed for future reference in my painting file.

RUST

Humbrol Matt Crimson 2 parts
Humbrol Matt Black 1 part
Floquil Rust 1 part

Can be improved by going over the rust spots again later with a blacker mix (1 Crimson, 1 Black), just in the spots that rusted first.

CONCRETE

Floquil Reefer Grey with just a smidgen of yellow. Lighten with 25% white.

Rust streaks down concrete: Dilute rust colour 1:3 with Floquil Flat. Brush on sparingly in vertical streaks. Apply thin streaks of neat rust in places for added effect.

WEATHERED RED — Such as on faded corrugated iron.

Humbrol Matt Crimson 3 parts
Humbrol Matt Khaki 2 parts
Floquil White 2-3 parts, depending on how much fading required.

The Khaki seems to minimise the tendency for the white to turn the red pink, besides adding a little "dirt" to the colour.

Apply over a previously painted grey base for best effect (such as a Floquil Primer base on metal surfaces).

Apply thinly.

Contrary to what I guess the "expert" painting school would teach (and certainly what the manufacturers preach) I irreverently disregard advice about mixing different brands of paint together, and using only the recommended thinners. For instance, I use turpentine as a general thinner for both Floquil and Humbrol (in the paint I'm mixing, and to wash brushes in — not to thin the paint in the bottle or tin).

Different brands of oil-based paints mix well enough together for most structure and scenery painting, and for weathering. I have even used small quantities of artists'

oil colours when the appropriate can of Humbrol, etc. wasn't on hand. The oil colours separate a little sometimes but this can be an advantage when slight variations in colour on the model would add to the effect, such as differential fading on a painted corrugated iron fence.

Note that for prime finishes on locomotives and rolling stock one should heed said manufacturers' advice, and stick to the one brand when mixing one's own shades.

The brands shown in the mixes above are only what happened to be on hand when first made, realising that future mixes could be of any different arrangement of brands. The brand is recorded only because their different viscosities may require some adjustment of proportions.

Keeping Floquil — from a reply by Floquil Paints to a query from Model Railroad Constructor a year or two ago, and some notes from personal experience.

1. Floquil sets when in contact with air. Once setting has commenced the process is irreversible; repeated mixing will not transform it.

2. When re-capping, wipe the tip of the bottle with a PVA glue before replacing the plastic sealing disc and screw-cap. (I have found Aquadhere diluted with water, to be better; it seals effectively and the sealing disc is easier to remove. Keep a bottle handy with your paints.)

3. When a jar of Floquil gets down to about half full, re-bottle it into a smaller bottle, so reducing the air space above the paint.

4. If the plastic sealer disc tears, cut a new one from acetate. Don't re-cap without it.

5. Two or three ball bearings, from a bicycle repair shop, in each bottle of Floquil speeds up the stirring process, particularly when the solids have compacted on the bottom. Shake for about one minute, or until the balls roll freely around the bottom of the bottle, indicating all the solids in suspension.

MODELLING QUEENSLAND RAILWAYS

CAMP WAGONS

by Arthur Hayes

Camp Wagons, as they are called in this part of the world, are like everything else I guess, each system having their own identification and classification. But all in all their basic role is to provide accommodation for employees away from home on the job.

This breed of wagon never stops to fascinate me with the various types, sizes and variations that pop up from time to time as the need arises, either by the department or by pressure from various groups.

Up to 25 years ago the main style of Camp Wagon in use on the Q.R. were modified box wagons (if you could call them that), mainly "C" class eight wheel and "AG" class four wheel box wagons with a small window in each end, plus a couple of windows in each side at each end, plus a stove (wood), kero fridge, wire bed, a couple of cupboards, table and chairs, etc. Some mod-cons were added by the staff who occupied them, such as wireless aerial (two styles), tinplate formed to various shapes for window shades, household guttering over doors, just to name a few, to make their life happier.

These wagons keep their classification and running number and were just endorsed CAMP WAGON, REFRIGERATOR, SHUNT CAREFULLY. A few of this style of wagon are still in service on the system today wearing both old and new colour scheme for ordinary goods rolling stock.

The next style to come along saw the conversion of a number of passenger cars replaced by the introduction of steel rolling stock on main trunk and suburban services. To list all conversions would take a full magazine. Basically, various doors and windows were boarded up and water tanks added (most being placed under the underframe with a working tank in the ceiling). On some of the older smaller cars with less headroom the working tanks were external on the roof. Who knows, this may be a first for the department and arrive with solar heating? In due course LP gas stoves, refrigeration and lighting became the in thing and replaced the wood and kero burning appliances. Coaches converted retain their basic colour scheme and were classified CW and TCW class, the latter being for train crews required for relief on long working and returning spare from foreign depots.

The ants pants of this series which came along in the mid-'60's were the clerestory roof coaches converted into mechanised maintenance gang Camp Wagons of the CWM class for the Northern Division. These vehicles had a running water supply, gas fridge and stove



Various types of Camp Wagons at Beaudesert in 1977. A. Hayes photo.



TCW 17 at Charleville in 1977. A. Hayes photo.



Old passenger cars are also converted, above are just two of them. A. Hayes photo.

with electric lighting from an alternator in the utility wagon. Each unit sleeps five to six men and are found working around the Northern Division in sets of four to six vehicles which include a utility (workshop) unit plus a pair of "LTW" ex-loco tenders for water. Wait for it . . . colour scheme, black underframe, blue to window-sill, yellow to roof line with a tan roof.

A few years later the department started building camp wagons from scratch. Starting from the bottom, with various ex-goods wagon bogies on a timber underframe, a weatherboard box was designed for three to four men. With mod-cons of gas stove, fridge and lighting, some even had a shower unit. Modern toilets and showers with hot water are still something for the future. Existing conveniences are still of the portable type and hot water, well, you boil your own with whatever is available. But in general this wagon has come a long way, at least inside you could call it home on the job.

Depending on which shops the wagon was built in governs the size of the weatherboard used. Wagons built at Rockhampton have a smaller board than those built at Ipswich and Toowoomba. To my knowledge Townsville didn't build any wagons, but in this wonderful rail system of ours anything is possible.

The colour scheme is much the same as for the coach conversion — black underframe, red body and the roof varying from white to black with everything between. End lettering and departmental records on underframe are in white, number and classification and test date for LP Gas equipment in yellow.

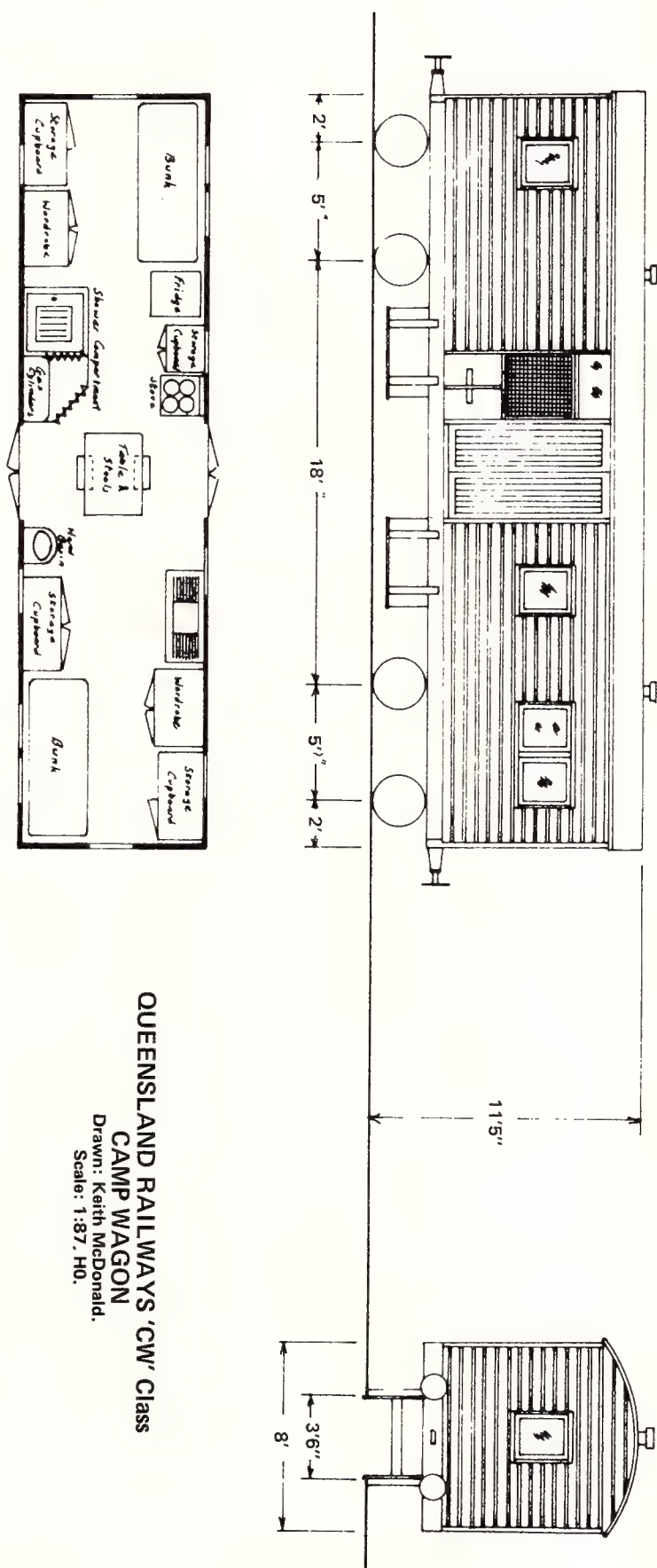
Most wagons carry a "CW" classification, with a few "CMW" getting about from time to time. Some have scrapped passenger car bogies fitted for use as "TCW" class camp wagon for trainmen. This wagon carries a red spot, making it available for express freight and livestock trains. Also, a few utility wagons, "CWM" class, have been built on the same principle with the major difference being less windows and altered door spacing.

Camp wagons being constructed for service today are still along the same principles with the only difference being larger windows on each end and a few extra windows along each side, with altered door spacing.

During the working year of both country and metropolitan stations with siding accommodation camp wagons come and go like flies. I recall one cold winter's morning just before five a lady passenger heading for her local suburban station walking past camp wagons placed in a siding just missing out on receiving a hot water ear wash from a half asleep railwayman doing his morning exercise (push-ups). Camp wagons in the suburban area are often used as change and meal rooms; at times they are often camped in, depending on how far men have to travel daily. Some stations are never without camp wagons in their yards, i.e., placed were a Maintenance Inspector is based, small towns that have a pub, and small stores, etc. Some stations have a siding just for placing such wagons. Just stop and think of the shunting that comes with camp wagons at stations with limited siding space. Wagons with loading from major towns and cities are taken off trains and placed in one end of the siding, the next day empty and loaded wagons are attached to trains heading back towards that town or city, plus not all wagons are cleared in one day. So if you like shunting, build a couple of camp wagons and place them in various sidings on your layout.

Camp wagons are often accompanied by tool and material wagons, depending on the tradesman and his equipment as to what type of wagon goes with his camp. It may be a box or open wagon, small or large, often a tarp may cover half an open wagon covering timber and equipment. From time to time camp wagons may have one of each, an open and a box wagon tagging along.

To give you some idea of the railwaymen that go around the system in camp wagons I will list a few that come to mind; Station and Bridge Carpenters, Station, Bridge and Signal Painters (Bridge Painters and Carpenters don't work on buildings . . . that's a Station Painters and Carpenters' job), French Drainers, Underwater Inspector, Interlocking Fitters, Signal-frame Fitters, Weed Poison Gang, Plant Operat-



QUEENSLAND RAILWAYS 'CW' Class
CAMP WAGON
Drawn: Keith McDonald.
Scale: 1:87. H0.

All windows fixed with external insect screens

Running Numbers: 167, 169, 171, 172, 180-184, 203-205



CW 336 at Beaudesert in 1977. This style of wagon is the latest to be outshopped from Ipswich Workshop. A. Hayes photo.



No. 3 Mechanical Resurfacing Gang at Glenroy Siding near Charleville. 'CWM' workshop and power unit, 'CW' camp wagon, 'CJ' store wagon and 'FGW' water jin for drinking water.



CW 122 and ALJ tool wagon at Coopers Plains. A. Hayes photo.



C 19483 old style camp wagon still in use at Dulacca in 1977.



Modified 'C' wagon, in use as a camp wagon at Bethania.

ors, Concrete Gang and Fencing Gang.

The equipment found in tool and material wagons would be self explanatory by the gang occupying the camp wagon, i.e., Station Painters, paint (top of the class for that one), ladders, store shed, tool boxes, planks and trestles, portable toilets and shower units, etc., say, compared with a Weed Poison Gang, who would have a small box wagon for storing poisons, a large open wagon for a Morot Quad (Section Car), Flat Tops (small flat top trolleys towed by quad) to carry water tanks and spray unit into the section, portable conveniences, etc., plus water wagons in the line of a couple of 'LTW' ex loco tenders coupled together to make one unit for water in isolated areas.

So let your imagination run wild and think of the equipment required by your gang and use a box or open wagon to run along with your camp wagon. If you can't fill an open wagon with junk (equipment) cover the remaining area with a tarp and cover a multitude of sins.

THE MODEL

Body Construction

The complete wagon is constructed from styrene, so if you haven't used this material, I suggest you hook on to July-August '75 A.M.R.M. and build a 'F' class wagon and use it for a material wagon to go with your 'CW'.

Make up a basic platform wagon as an underframe using .040" styrene making allowances for the thickness of material for the sides. Take a length of .030" styrene the length of both sides and ends and as wide as the highest point on the end of the wagon and scribe to the width of weatherboard required. Take a file and run it along in the scribe lines a few times to give a chamfer look, if the styrene bows, scribe the back as well, this will pull the material flat again. Take one corner and number it 1 and cut scribed material into sides and ends, as if you were walking around the wagon, numbering each end for each corner, this will keep the scribing uniform around the wagon. Cut out windows, allowing for window sills to be fitted, round off ends for roof using sandpaper or file. Cut doors and recess area on side for gas bottle out, this will cut the sides in two, rejoin with another piece of styrene of the same height as the side, less the thickness of the floor and a little wider than the doors, rejoin the side without the gas bottles to correct length. Do the same for the other side but allow for the recess area.

Using microstrip (Slater's plasticard cut into fine strips from .010" x .020" up to 4 and 7 mm scale in 3" to 12" wide, to .030" thick and approx 70 mm long, also available in assorted packs and in lengths of 260 mm), insert window sills and frames, for window shades I used .040" styrene and sanding block to a line to get the required angle, doing the total length required in one hit, cut to size and add to side of wagon. Window shades are not on all wagons and were not on the first wagons that came out of shops, but are now being added to all wagons and are on new wagons coming from shops. I then painted the window frames and edges.

Attach the ends and sides to underframe in the order they were cut off, enclose recess



CW 122 showing other side of wagon with water piping, hand brake and window curtains.



CW 122 showing water tanks, brake cylinder, gas bottles and recess area plus door and window detail. A. Hayes photo.

area with scrap .030" styrene. Scribe a piece of .020" styrene for the door. I used micro-strip again for detail around the door by placing one piece on its side against the side and then flat down all around the edge, plus two pieces up the centre to make two doors. Cut scribed piece to size and fit into remaining area.

Clear plastic was cut to size and used for windows and held into place by styrene on the same principle as sliding windows. Curtains were cut from a scrap piece of Crinolene cloth and held in place using P.V.A. glue, allowing to dry and hit with a bit of MEK for good measure.

In fitting the roof cut out five inside supports using the ends as a template, and insert between the sides. Take a piece of .040" styrene approx. 30 mm larger on both side and length required for the roof and attach to a tin can approx. same diameter of roof, immerse into boiling water and then into cold water, it may require a couple of dippings to obtain near correct bow, cut to size and attach to body.

Water tank was made up and added to underframe, this is a good place to add weight to your model. Water pipes are made up from lace pins (see your wife), they are longer and bend without breaking, not like the ordinary pins. Handrail wire was used for Truss Rods and small fish hooks size 25-10 (K-Mart) for queen posts. A standard Q.R. brake cylinder was made up from kit edging (sprue). Portagas bottles were knocked up from Plastruct using two different diameter tubing in a hand drill to round off top corner and a groove in the bottom. Most of the detail in the gas bottle recess area was added by using microstrip and wire mesh cut from fuel filter wire. Air ventilators on the roof are punched from scrap styrene using a leather punch. Buffers used can be ERG or KAY'S K104 'oo' wagon buffers.

Bogies

Hook on to a pair of H0n3 logging bogies (available from Hobby Shops who stock narrow gauge equipment) and cut both axles in half, careful if using your X-ACTO saw, if you are in a hurry, you will lose the teeth on your saw. Cut bolster in half also. Regauge wheels by using 1/8" brass tubing cut to 10 mm and bush using a plastic drinking straw, insert cut axles, check for back to back and that axle is running true, assemble with a drop of super glue.

Some time ago I obtained from the local hardware store a box of 1/8" x 5/16" x 22G steel washers for bogie pivoting centre on underframes, by adding one or two to obtain correct floor height. Take two 1/8" washers and run a ring of solder on one side of both. Place both washers on an 8 BA screw with soldered sides together, place the cut underframes between the washers, one on each of the screws, holding everything together with a nut. Insert axles, care that both insulated wheels are on the same side of the bogie. When satisfied that bogie is square and sitting even, sweat solder and bolster together. Before removing the nut and screw fill the area between the washers, front and back of bolster with solder, this will add strength and



CW 169 one of the class modelled in the article. A. Hayes photo.



Model of H0n3 1/2 QR CW and louvre van. Photo Arthur Hayes.

final appearance.

When finished fit bot bogies to wagon using 1/8" washers as packing to obtain correct floor height using 10 BA screws. Add couplings of choice, I used MKD 6 on one end to a height of 9 mm to coupling centre, and a Sentinel knuckle on the other end for a permanently coupled 'ALJ' box wagon for tools.

Painting

The closest colour available over the counter would be Floquil Tuscan for body and weathered black for underframe and roof. When using Floquil on styrene it must be primed by Floquil 'Barrier' first. Most of the wagon was painted on completion except for around the window frames, which was done before glass was added and the gas bottle recess was painted before gas bottles and mesh was put into place. Lettering was achieved by using white drawing ink for all figuring, including class and number, and LOGIE if modelling after '71, using a mapping pen reversed. Yellow

figuring, i.e., class, number and logie were then touched up using yellow ink with a small pointed paint brush.

TRADE PRACTICES ACT 1974

The above act is now in force and contains strict regulations on advertising.

It is not possible for this company to ensure that advertisements which are published in this magazine comply with the Act and the responsibility must therefore be on the person, company or advertising agency submitting the advertisement for publication.

In case of doubt, consult your lawyers.

SCR Publications.

ISO CONTAINER WAGONS of the S.A.R.



FCS CLASS

During the mid 1960s livestock traffic was slowing down on the SAR broadgauge while container traffic was rapidly increasing. Surplus bogie cattle and sheep vans were converted into 36ft. timber decked FC class flat wagons commencing in 1965. In 1969 ten similar flats were issued with steel decking and were coded FSC. Both the FC and the FSC were modified to carry one 6055mm (20ft) container. In May 1972 they were all reclassified as FCS and there are now seventy in service. The container is positioned at one end so that fork lift trucks can use the decking as a loading platform.

FOX CLASS

Construction of these 63 ft long container flats commenced in March 1970 and 121 are currently in service. Number 122 is coded FQS because it is fitted with different brake gear on a trial basis. At first the wagons were built from Aus10 alloy steel but in later years mild steel was used. More of this class will be built as required. They can carry three 20ft or one 20ft and one 40ft container.

The VR has over 300 similar wagons coded FOX but apart from the same deck dimensions and container anchor points there is little in common between the two types of FOX. The VR developed the standard 63ft container flat design so the two FOX types, OCX and OXY (NSWPTC), RMX (ANR), and WFX (WAGR) are all similar but not identical.

SFKX CLASS

This is a 75ft flat for containers and general traffic. The first was issued in 1970 and 18 are currently in service. There are no plans to build any more of this class. The SFKX can carry up to three ISO containers.

SFCW CLASS

These 50 tonne, 24.9m (81ft) skeletal container flat with 33 inch wheels were built specifically to carry the TNT, Altrans and GMH 40ft containers. To avoid exceeding the normal height clearances the floor line was lowered and smaller wheels were fitted. The couplers have an offset in the shank to bring them up to the normal height. The first was issued 14/12/73 as SFCS 1 but was reclassified SFCW in February 1974 with the W meaning that the wagon can be bogie exchanged but onto special bogies. They usually carry two of the special containers but have been seen with up to four ISO containers. There are 18 of this class in service.

The VR used the SAR underframe drawings for their FCF but fitted different brake and uncoupling gear and another type of container locks. These wagons have been the subject of many Union complaints in Victoria and the original order for 50 was reduced to 25 with several being retained as sheet steel carriers within Newport workshops. Commencing March 1977 they are being recoded FCW.

The JCW (NSWPTC) was designed and built by ComEng although agreement was reached with the other systems regarding bogie centres, side bearer dimensions, height above rail level and container retainer locations. In addition to these wagons which were

V.R. 'ELX', S.A.R. 'FCS' and A.N.R. 'GMX' all carrying containers between Adelaide and Melbourne in April 1977. R. Gallagher photo.



SAR 'FOX' container wagon, loaded with RACE containers at Grafton (NSW) in November 1977. Photograph by Bob Gallagher.



S.A.R. 'SGMX', 'FCS' and 'FOX' on a container express near Ballarat in April 1977. R. Gallagher photo.

specifically intended to carry the containers, in times of wagon shortages other classes are pressed into service. Bogie opens of the OW, ELX, SGX, SGMX and OX classes and flats of the FBX, SFBX and FB types are frequently used. It is rare to see SAR four wheeled opens carrying containers; however VR four-wheel flats of the KQ and KMQ classes are frequent visitors to SA. There are currently no SAR four wheeled flats in general service.

Of course there are many other types of containers carried by the railways and the SAR has built or modified wagons of the SFQX, FOX, FVX and FWC classes for refrigerated and private owner containers.

Phil Curnow, 1977

Postscript.

Since this article was written in 1977 the 'FCS' class has been withdrawn from broad-gauge container traffic. Most have been scrapped. (Editor).

EXHIBITIONS

SYDNEY — NSW. September 30, October 1, 2 at the Westco Pavilion, RAS Showground (Driver Ave) Sydney Open 1000-2300 (Sat), 1000-1800 (Sun), 1000-1900 (Mon). Admission \$1/60c. Organised by the Australian Model Railway Association NSW Branch.

LOWER PLENTY — Victoria. October 7th, 8th at Lower Plenty State School, Main Rd, Lower Plenty. Open 1200-1800 both days. Admission 60/30c. Organised by the Mont Valley Modelling Group.

SUBIACO — WA. October 7th, 8th, 9th at the Subiaco Civic Centre. Open 1030-2100 (Sat), 1000-1900 (Sun), 1000-1800 (Mon). Admission 80/40c. Organised by the Australian Model Railway Association WA Branch.

GEE LONG — Victoria. January 26, 27, 28 & 29, 1979 at the Waterside Workers Hall, Eastern Beach, Geelong. Open 1800-2200 (Fri), 1000-2200 (Sat), 1000-2100 (Sun), 1000-2000 (Mon). Admission 80/30c or \$2 (Family). Organised by the Corio Model Railway Club. Particulars Ray Slack (052) 21 6268 pm.

VICTORIAN RAILWAYS

'V' CLASS COMPOUND 2-8-0

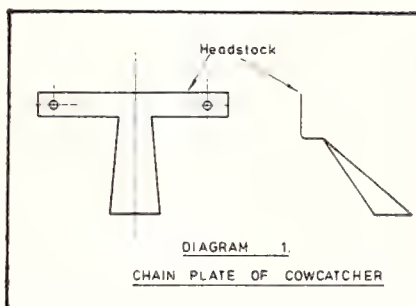
Frank Kelly continues his description of model locomotive building method, this issue detailing 'cow catchers'.



Victorian Railway 'V' class standing on the up road at Malmsbury. Photo: Frank Kelly.

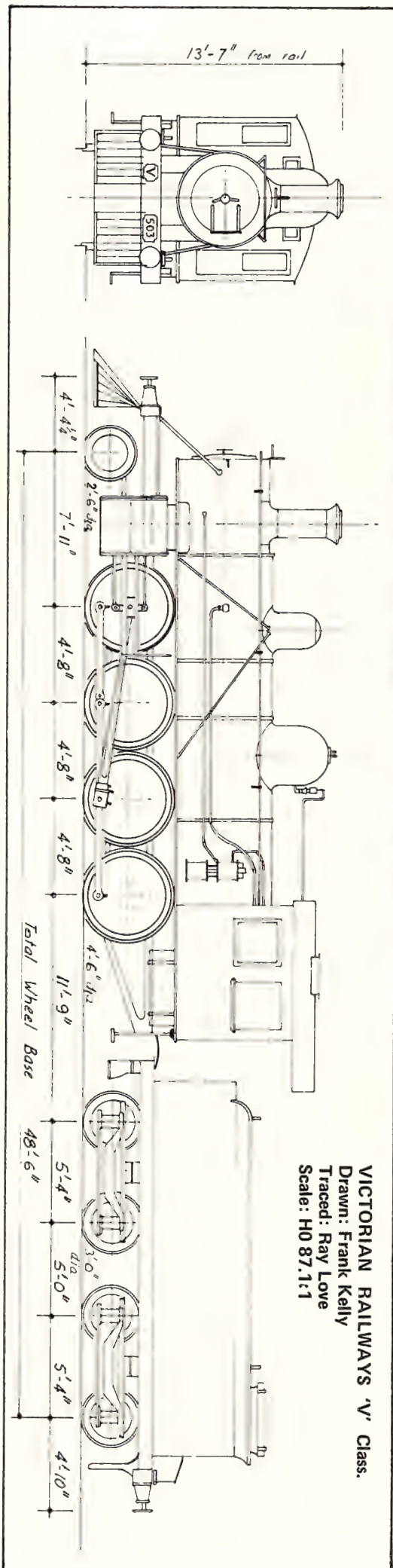


'V' class 2-8-0 doubleheading a passenger train through the Victorian Model Railway Society model station of Malmsbury. The prototype Malmsbury is 60 miles north from Melbourne on the Bendigo line. Photo: Frank Kelly.



In the last year of the last century the Victorian Railways imported from the Baldwin Locomotive Works a heavy Vauclain compound freight locomotive, plus a set of drawings so that copies of this locomotive could be made here in Victoria. The Phoenix Foundry at Ballarat built the duplicates. The Baldwin pattern engine was numbered "V"499. The Phoenix engines were numbered 501 to 529 (odd numbers), a total of only 16 locos. The writer wonders if these Phoenix engines were the only Vauclain compounds built outside America.

The reader who has been following these



articles in AMRM will realise that the writer has tried to make them as interesting as possible; not a step by step description of how to construct a certain locomotive, but rather general hints on certain problems. For example, the writer thinks that the ideal drive for a model is a flywheel-fitted motor mounted in the tender (the only large space available in early prototypes). Most of the author's models will coast three feet from full power using an ordinary controller. Even a little nostalgia has crept into these articles as in the last issue of the "D" class locomotive.

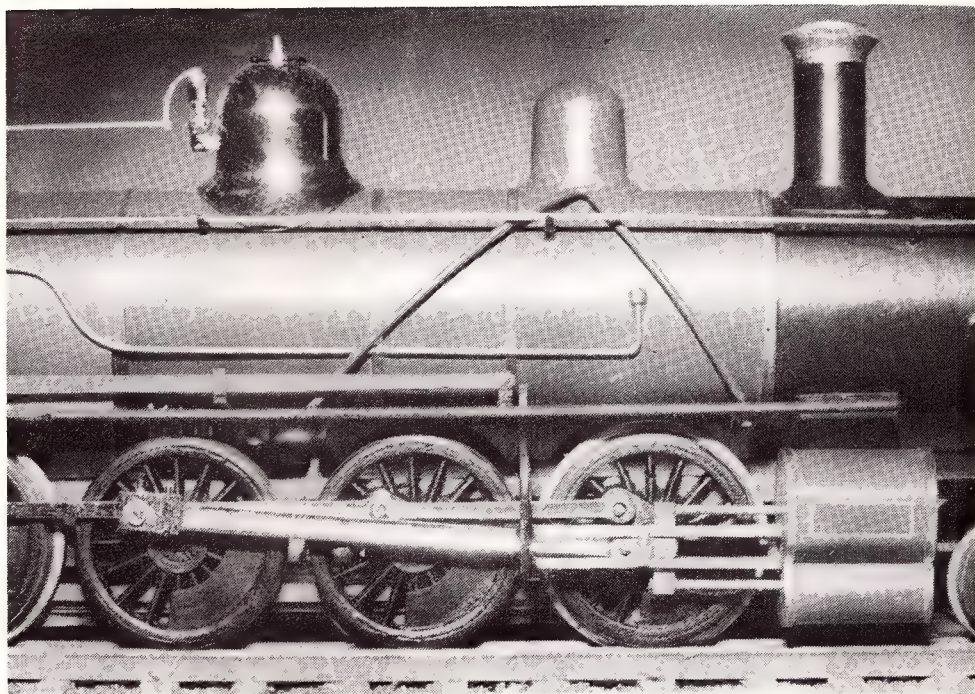
VR Locomotive Cowcatchers

This article deals with the Victorian cowcatcher. The cowcatcher is quite a simple thing to construct, if a little thought is put into it. The writer has studied many photos of locomotives around the world and nowhere is there a cowcatcher quite like the ones fitted to early VR engines. The South Australian Railways did have one similar, but not quite the same as the VR style.

The front plate is called the chain plate. Its job was to prevent the screw or chain coupling from dangling between the bars making it hard for a shunter to free it. In the smaller scales, the buffer beam (or headstock) and this plate are cut out of .010 brass sheet and the chain plate is bent to form the angle of the cowcatcher in side elevation (diag. 1). It should be clear from this diagram that if auto couplers are to be fitted this plate must have one extra bend in it. It is then bent from the bottom upwards to form the V of the tip, as this bend starts at nothing near the headstock. The bottom of the chain plate must be cut wider than the top so that when finished both sides of the chain plate will be parallel in front elevation.

The headstock and chain plate are now soldered to the model. The bottom can now be marked for trimming by standing the model on the track; the author allows 2mm clearance between cowcatcher and rail. The vertical flat bars at the buffers are soldered on next and then the bottom flat bar; this bar has to have a notch in its middle so that it can be bent to conform with the V of the chain plate. The 'open spaces' at each side of the chain plate are now filled in with lengths of copper wire representing the round iron bars of the prototype.

In the early days, the cowcatcher was wide, the outside bars being outside the buffers. However, from about 1917, all cowcatchers were narrowed down. This was to prevent



Victorian Railways 'V' class 2-8-0 compound showing coupling and connecting rods. Photo: Frank Kelly.

the bottom edge fouling the new auto air brake lineside trips for the suburban electric trains being introduced at the time. Those trippers are built to withstand 'tripping' of 60mph trains, but perhaps not 60mph steam locomotives.

About 1905 or 06 a step was incorporated in the bottom bar on each side for the fireman or shunter to stand on when coupling funnel first.

The cowcatcher being in a position to get damaged easily (the prototype suffered this also), it must be stayed back to the footplate with brass or bronze wire. The dual coupler pocket is made out of .006 sheet brass. The coupler can be made to swing aside as in the real thing, and the 'transition chain' or screw coupling swung into place. The two couplings are held by a small pin. On the front of the

prototype there is not enough room for a regular sprung draft box hence the solid pin. If a hole is drilled through the headstock where our coupler swivel pocket is to be placed, it can be anchor soldered from the back of the headstock as with the tank filler and tool boxes shown on page 26 or the Jan/Feb. 1977 issue of AMRM. As much soldering as possible should be done from the inside of the model to spare the task of cleaning up afterwards. The writer often employs this method of drilling a hole and anchor-soldering parts to the superstructure of the model.

With the advent of "C" class 2-8-0 of 1918 the VR style cowcatcher design was modified by replacing the vertical round bars with lattice cross bars. Later again, with the advent of the Hudson "R" class, a pressed steel cowcatcher design was evolved.

THROTTLE CONTROL MODIFIED

Continued from page 17.

operator can tell by feel and can play safe in determining the settings. Since as can be seen from the graph, a considerable time is required for the track voltage to reach its peak, this is a built in safety feature of the system. The insertion of the diode D9 to cut off the discharge route (1) reduces the TR1 base voltage setting as well and adds to the safety features. You will note that the maximum track voltage reached in the test was 11 volts this is due to the fact mentioned above and is the result of not yet changing the resistances to the values given in the circuit diagram of figure 7.

In my case also, the lamp LP1 was replaced with a 15 ohm, 10 watt resistance and a fuse as I was not certain of what effects the full 33 volts would have on the lamp bulb. In addition LED warning lights have also been incorporated into the circuit but are not shown in the circuit or in the basic facia layout. Now I am off to purchase my first loco so that the next stages of testing can be entered before I actually commit myself to the actual layout — *A little knowledge may be dangerous.*

Further developments (Appendix B) will be published in the January/February 1979 issue.

The advertising DEADLINE for the November/December 1978 issue is the 20th October, 1978. Please be early.

MARKET PLACE

PRIVATE: 15 words for \$1.00, extra words 5 cents each. Minimum \$1.50 per insertion. Advance or continuous insertions not accepted.

COMMERCIAL: \$1.25 per line, minimum of \$6.00. Advance continuous insertions not accepted.

All monies must accompany copy, which must be clearly written on paper. Definitely no phone insertions accepted. If stamps are used as part payment, each stamp must not exceed the standard postage rate, and must not be attached to any paper.

Send all copy and payment to SCR Publications, PO Box 235, MATRAVILLE, 2036.

FOR SALE

HORNBY OO Co - Bo diesels. 2 for \$120 ono. Both in excellent condition. McKenzie, 56 Gladstone Ave., South Perth. Ph (09) 367
FOR SALE NSW Railmotor & Trailer CPH/CTH (Bergs) and 41(Workshop 5). Both painted and lined. Offers to Conolly (02) 498 7467.
PUFFING BILLY Model Dockyard HO 2 1/2. Unpainted, mint condition. C.E. Thompson, 69 Limestone Ave, Braddon ACT 2601.

HO SCENIC train layout on 9' x 5' board, 2 engines, 18 rolling stock, 70ft of track, 10 electric points plus crossover, 2 controllers, completely wired, mountains, tunnels, lighted buildings etc. \$195 Rob Ormond, Vic (03) 5782627.

BASEBOARD sections 4' x 2' (2) and 3' x 2' (for Windsor NSW), Peco track and points (new), workshop 5 carriage kits (new), Railway Modeller from 1966. Sell for cash or swap for Meccano parts, literature, Meccano Magazines. A. Bromley, 124 Gowrie St, Newtown, 2042, Ph (02) 514594.

O GAUGE US Hobbies K-4 4-6-2 Pacific, new in box \$435 Ph (02) 522 7855 or write 117

Edward St. Silvanla Heights. NSW 2224 On3 C-16 Sunset 2-8-0 new in box \$285. Ph (02) 5293976 or write PO Box 57 Allawah 2218 also various rolling stock and kits.

NSWGR 48 class (Bergs) painted and lined. Phone (02) 4987467.

LILIPUT German 4-6-4 \$35, Hornby 'Dutchess of Kent' Princess \$30, three R727/8 coaches \$22, Triang hopper set \$10, Hornby Dublo three rail 2-6-4 tank goods set \$60, two rail 2232 Co Co \$30, Bing electric 4-4-0 (not working) G.W. and two coaches 'O' \$150. Large quantity HO & N Peco underlay cheap, Peco N Jubilee \$35, various books and magazines on UK railways. Ring John Tipper 20933 x423 or (02) 709 8656.

ADD atmosphere to your layout room with gauges from NSWGR steam locomotives. Steam pressure & pilot drifting, restored in polished brass and mounted. Only 2 or each left. \$35 inc post. J. Sever, 48 Bunday St., Higgins 2615. Ph (062) 542526.

'O' Gauge brass, On3 13 ton shay Westside DRG & W, wheel and ties car, class 6000 flat car, Cripple Creek caboose all new brass. Standard gauge 'O' brass, USM KTM, USRA 0-8-0, SP GS4 4-8-4 Daylight all new, Sunset USRA 2-8-2 light new brass. Sucoast building kits, 0-0n3 Keystone logging car kits. Wanted to buy, UP Big Boy, UP 4-8-2, SF 2-10-4, 4-6-2, 4-6-4 or other any condition. A.P.M. 23 Bright Crest. Mt. Eliza 3930. Ph (03) 787 6860.

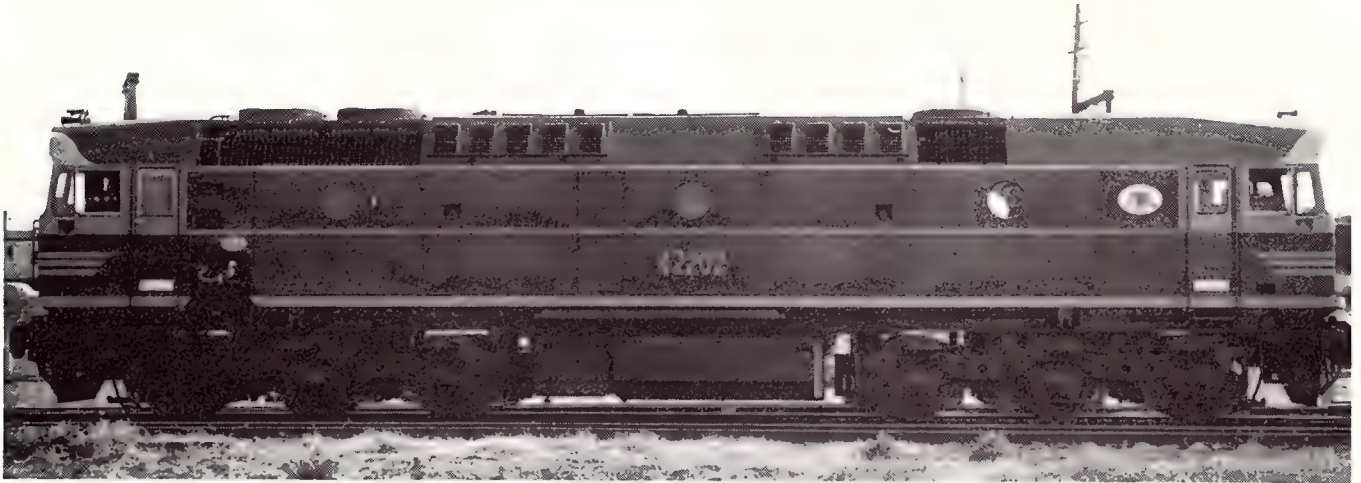
RAIL MOTOR, CPH HO brass detailed and painted. Mint condition. \$95. D. Molloy. Ph. (02) 642 3643.

TRIX twin 3 rail 'Meteor' diesel express set. One transformer, 2 controllers. Some track and wagons. Real collectors item. Ron Johnston, 47 Kimbarra Close, Kotara. (047) 525348.
SURPLUS items in 00 collection. Large quantity Hornby Dublo (2 and 3 rail) Wrenn and Triang/Hornby locomotives. Many obsolete items boxed. Send stamped addressed foolscap envelope to T.N. Pusenjak, 30 Pennant St, Nth. Perth 6006 W.A. for list.

HO AHM RS2 \$12, Tenshodo (kit built) 0-8-0 \$80, Grafrar N Southern coaches \$3.50 ea. P. Garrett, 25 Armstrong Cres. Modbury Nth. S.A. 5092.

Continued on page 62.

N.S.W.P.T.C. 422 Class Diesel Electric Locomotive



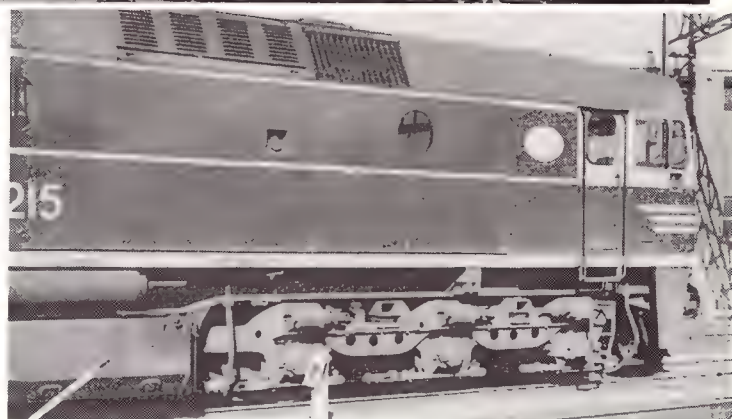
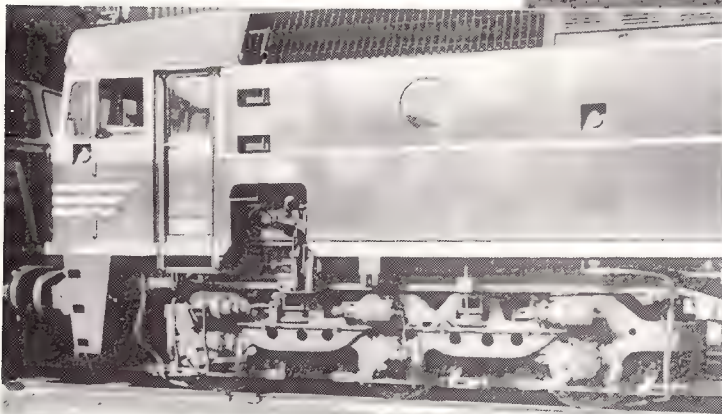
Note the differences on the opposing sides of 42202. N.S.W.P.T.C. photographs.



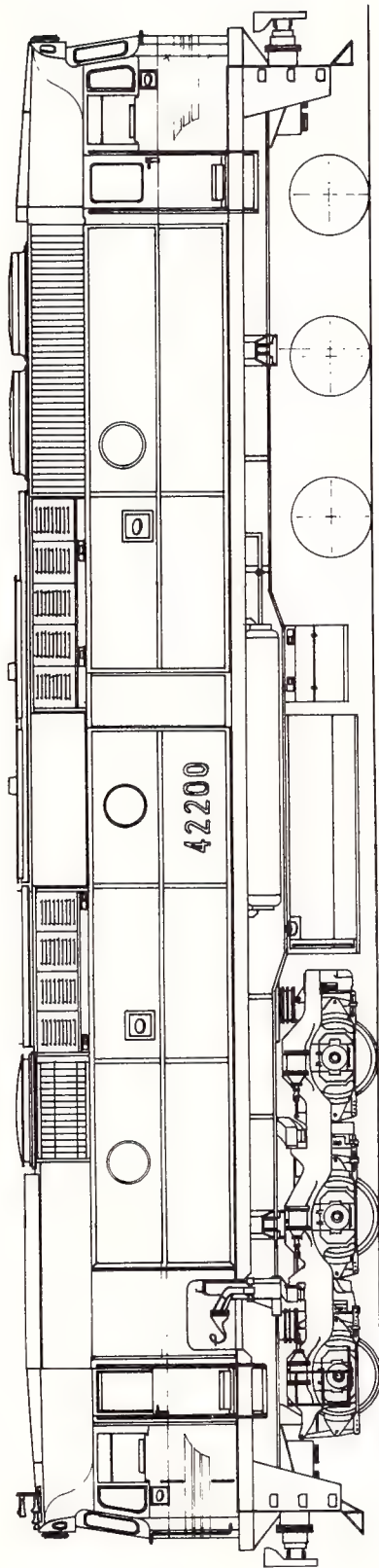
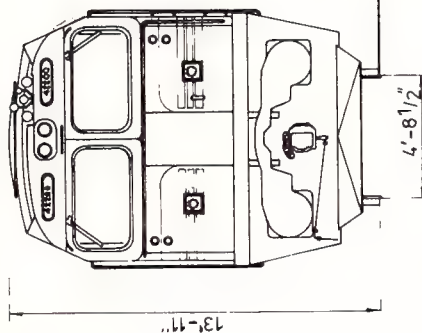
N.S.W.P.T.C. photograph

Requiring additional main line motive power, the New South Wales Government Railways called tenders during July 1967 for twenty diesel-electric locomotives with a power output in the 1455/1340 – 1640/1490 kW range. This action led to the placement of a contract in May 1968 with the Clyde Engineering Company, Granville for twenty Clyde-GM J26C type locomotives. They were commissioned as the 422 class between 25 January 1969 and 20 January 1970. These locomotives, which represented the first use of the EMD 645 series engine on the N.S.W.G.R., could be considered as the initial second generation units on that system.

The 422 class locomotives are essentially a local variant of the SD.38 and SD.38-2 models marketed by General Motors in the United States and Canada. Unlike these North American hood units, the New South Wales



9'-9"
over handrails
9'-7"
over main frame

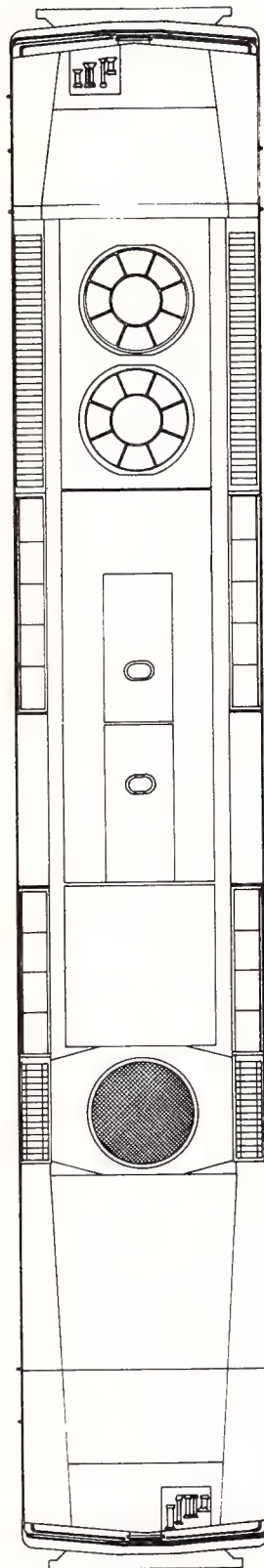


6'-3" 3 1/2" 6'-3"

34'-0" bogie centres

56'-4" over headstocks

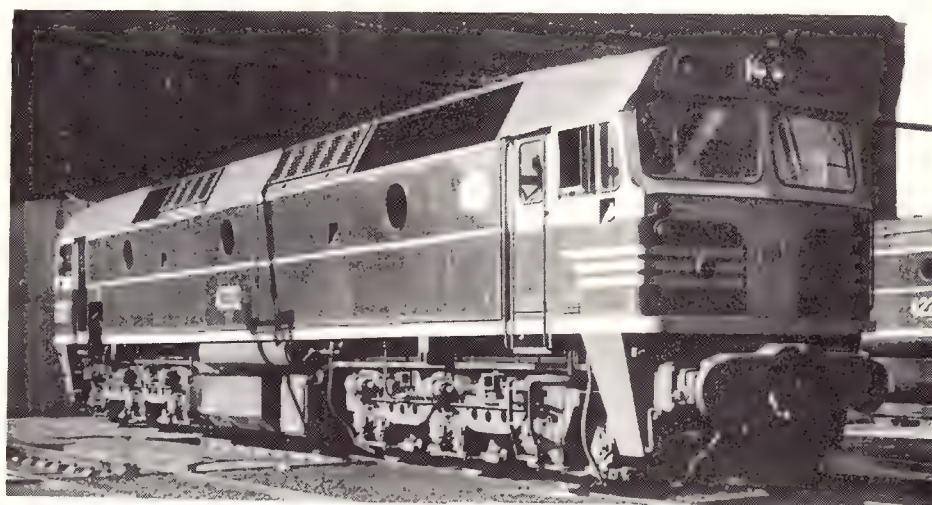
60'-6" over pull faces



N.S.W.P.T.C. 422 Class Diesel Electric Locomotive.
Drawn: Roger Johnson
Scale: HO 87.1:1

locomotives are double-ended cab types. However, the engine, generator and traction motors employed in both types are identical. Powered by a single EMD 645E series V16 engine, the 110 tonnes 422 class locomotive develops 1640 kW at 900 r.p.m. of which 1490 kW is available for traction purposes. Allied to the engine is an EMD D32 generator powering six EMD D77 traction motors. Starting tractive effort is 32 950 kg (at 30% adhesion) and 21 970 kg (at 20% adhesion). Continuous tractive effort is 32 200 kg (at 29.3% adhesion at 12.4 km/h). Road numbers are 42201-42220 inclusive.

The operational area of the 422 class has been generally confined to the Illawarra and Southern Divisions owing to crew qualification and maintenance requirements. On rare occasions, they have been noted working between Sydney and Broadmeadow/Newcastle. Such occasions have mostly been due to performance trials. Since their inception, they have been based at Delec Locomotive Depot in Sydney. Their employment covers such activities as main line express passenger and freight workings as well as mixed traffic duties on certain secondary lines. A maximum service speed of 125 km/h has been set for these locomotives which are equipped with high adhesion bogies. Like all N.S.W. main line diesel-electrics, with the exception of the now extinct 40 class units, the 422 class locomotives



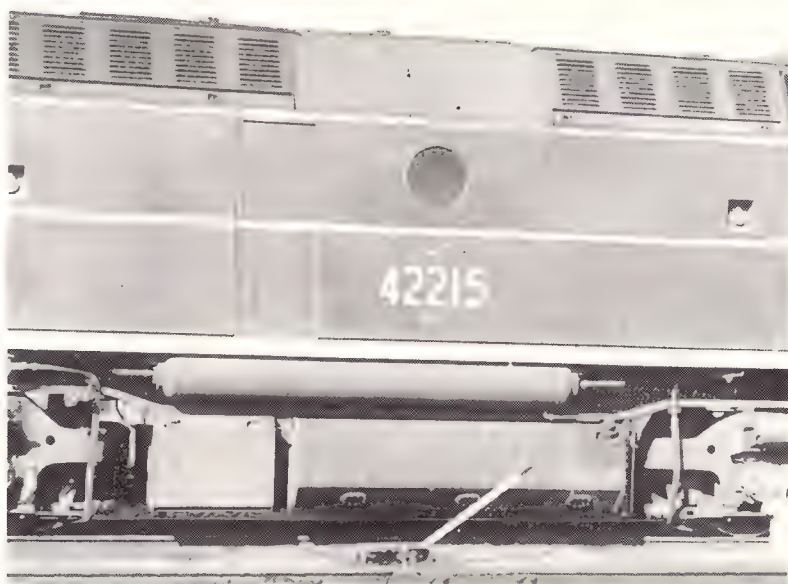
are fitted with staff exchanging equipment and dynamic braking.

The bi-directional nature of the 422 class locomotives, coupled with their medium range power output and tractive effort, has made them a valuable asset of the New South Wales system. They can operate in multiple with 42, 421, 422, 43, 44, 442, 45, 47, 48 and 49

classes of diesel-electric locomotives. These attractive locomotives, which introduced the double-ended noseless cab design to Australia, will form an important part of the N.S.W.P.T.C. motive power fleet for many years to come.

Paul Rogers.

Photographs of N.S.W.P.T.C. '422' class by Graham Ball.



STATIC MODELS

Are you looking for a way to add variety to your rolling stock for little effort and expense? If you are, why not convert some of your older type rolling stock to Departmental vehicles. For a minimum of effort you can add some eye-catching equipment to your layout.

In New South Wales the Public Transport Commission converts some of its obsolete equipment for use in the 'W' and 'L' rosters. The 'W' roster is for rolling stock used by the Civil (Way and Works) Branch. The 'L' roster is for rolling stock used by the Mechanical and Electrical Branches. Vehicles in these rosters can be found in most large yards. Probably the most common vehicle I have seen used is the ubiquitous 'S' wagon.

If you wish to convert one of your 'S' wagons I suggest you first find a suitable prototype. Many vehicles in these rosters have special markings. These markings may show the specific use for which they are intended, or the towns between which they are meant to be used.

The colour of the vehicles in the rosters also varies between individual wagons. Many wagons in the rosters are black.



Part of Max Burke's weedkiller train, parked on a siding on the MENANGLE exhibition layout. Photo Bob Gallagher.

However, 'S' wagon W197, as I recall, is a creamy yellow colour. A car of another colour is W278, formerly AM1782, which is painted an almost glaring yellow. This car can now be seen at the Lithgow Zig Zag.

These wagons can become a real talking

point on your layout as well as eye-catching. I can still remember seeing one of the weed spraying wagons sitting on a siding on the Menangle layout at the last Sydney exhibition.

Stuart Livesey.

SAR's 45 Ton COAL HANDLING PLANT.....Part 2

Plans by Paul Brooks and Bob Yule.

Historical research by Ron Stewien.

Article prepared by Phil Curnow.

In the first part of this article (AMRM March/April, 1978) details were given of the development of this design and Terowie coal plant was shown in plan and photos because it was built with the winch house directly behind the tower. In this part we'll look at the variations from the 'standard'.

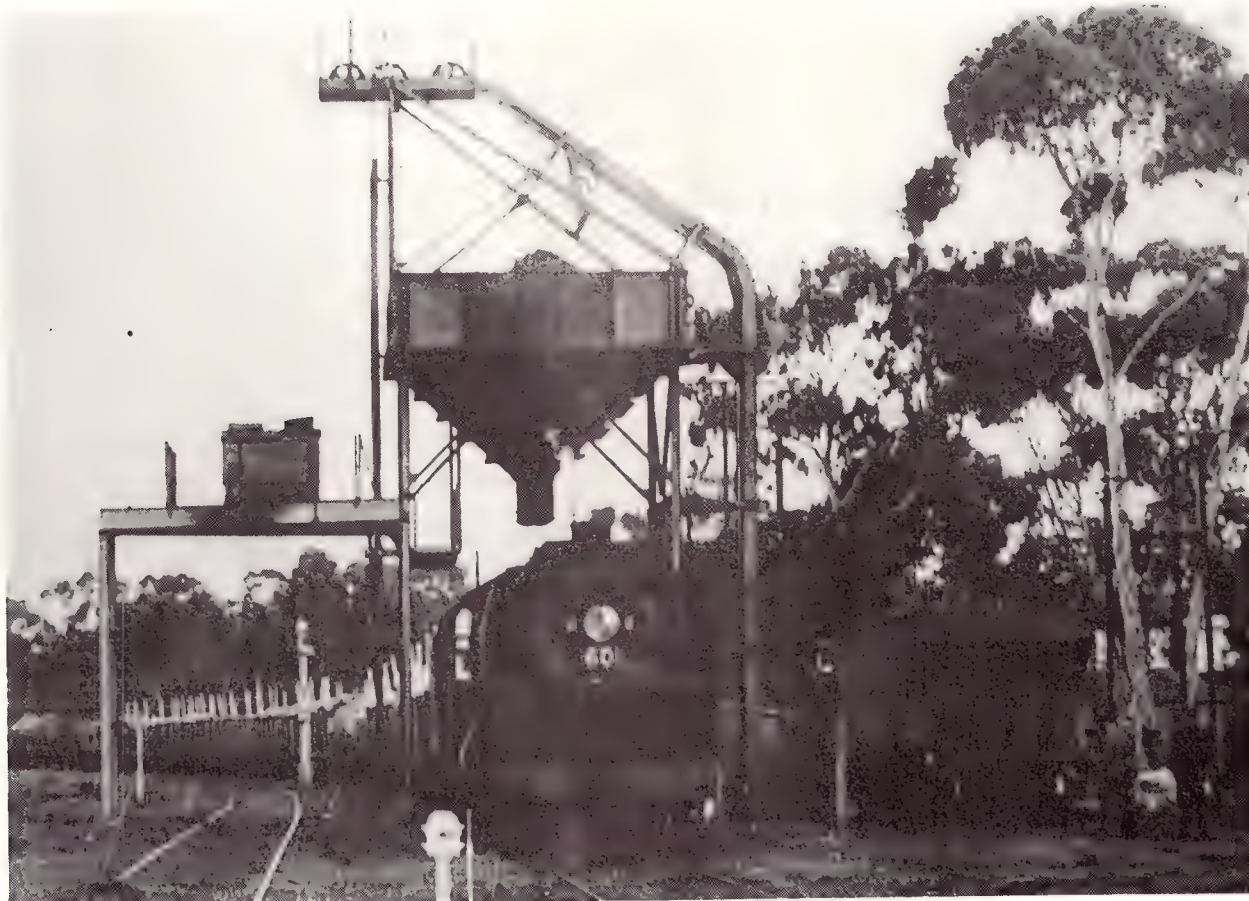
COCKBURN coal handling plant was the first of this design to be completed as con-

struction began in February and was completed in October of 1943 and commissioned soon afterwards. Total cost of this project was £3135/7/6. Because of its location in the trackage leading to the engine shed there was not enough room for the winch house to be sited directly behind the tower. For this reason the wire ropes were passed from the top of the tower through a set of pulleys attached to a

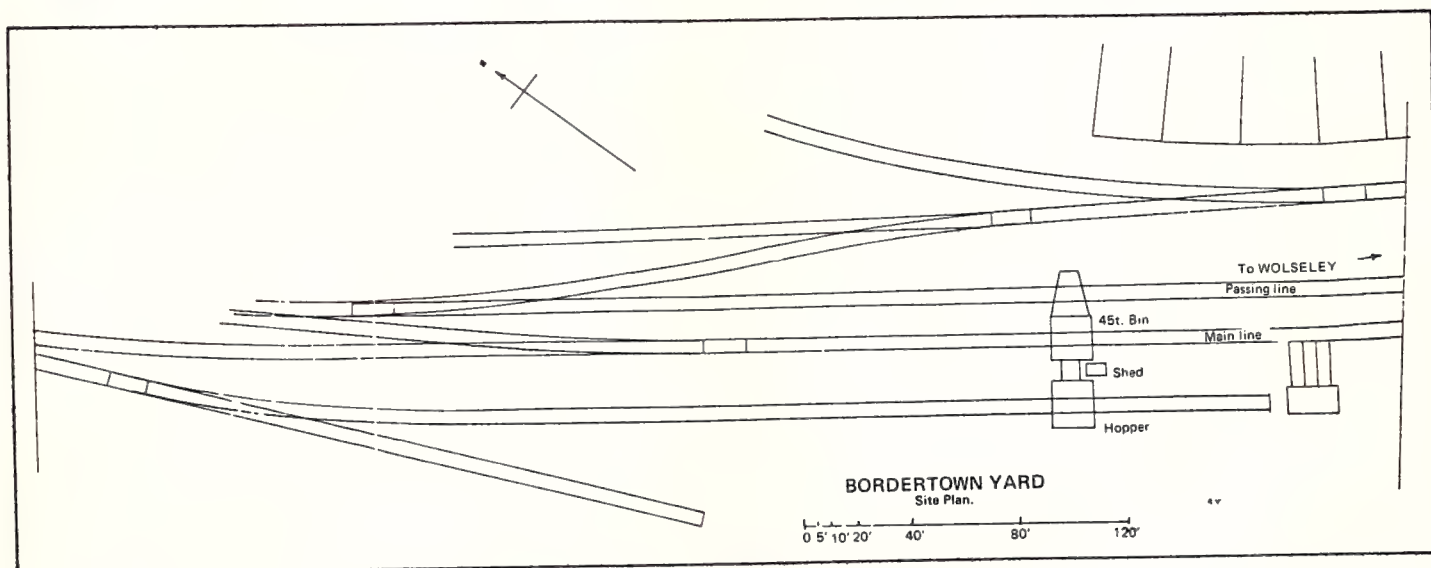
block of concrete buried in the ground and then parallel to the tracks for a short distance before they entered the winch house. The plant was removed after the withdrawal of the T class 4-8-0 shunt engine in 1969.

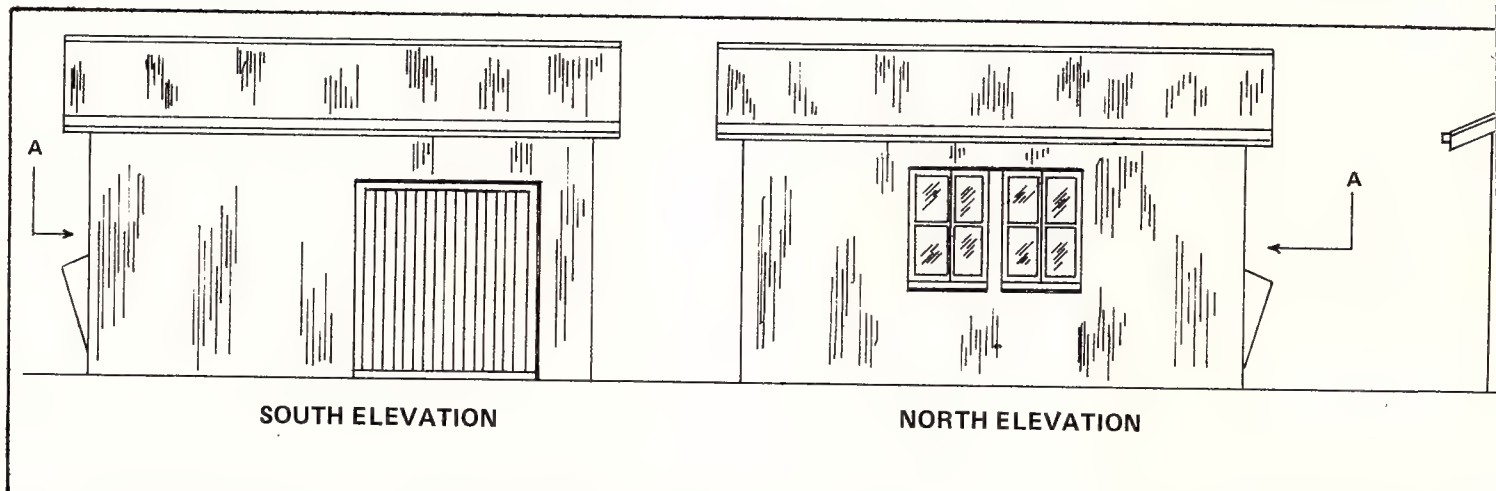
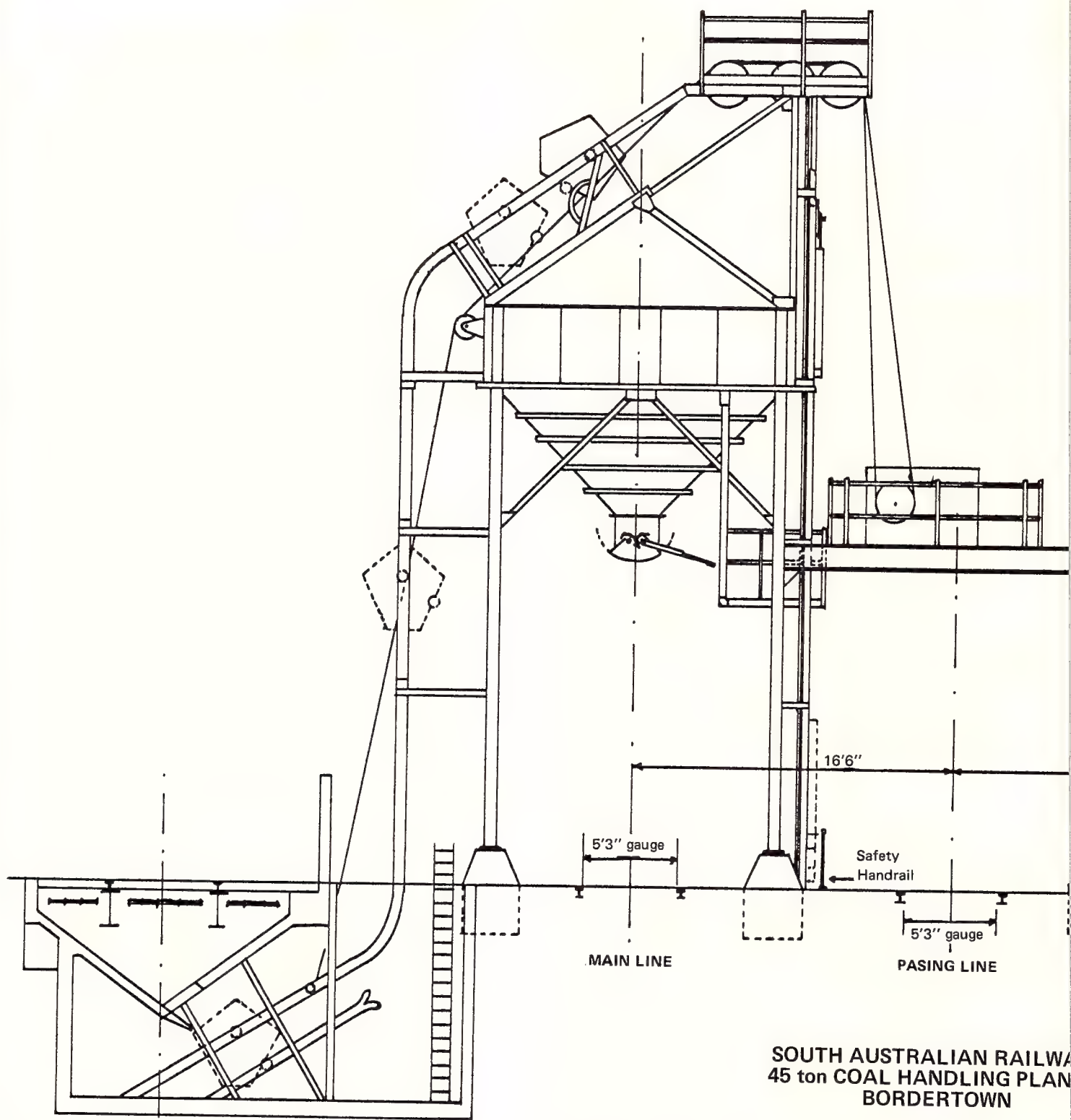
BORDERTOWN coal handling plant was built about 1949-1950. This station did not have an engine depot because of its location

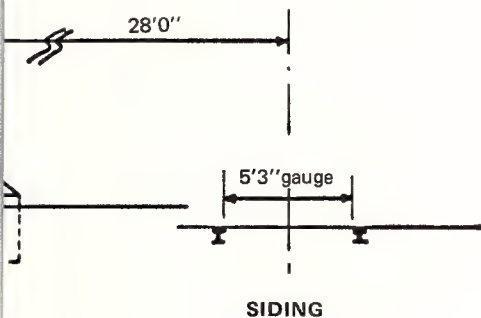
Text continued on page 37.



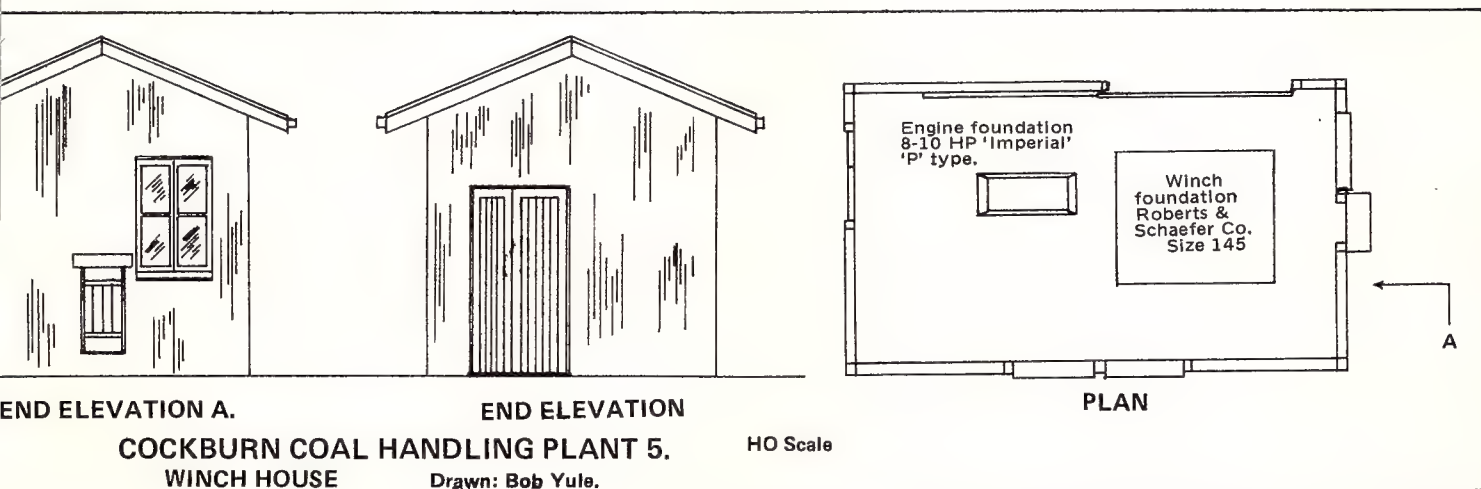
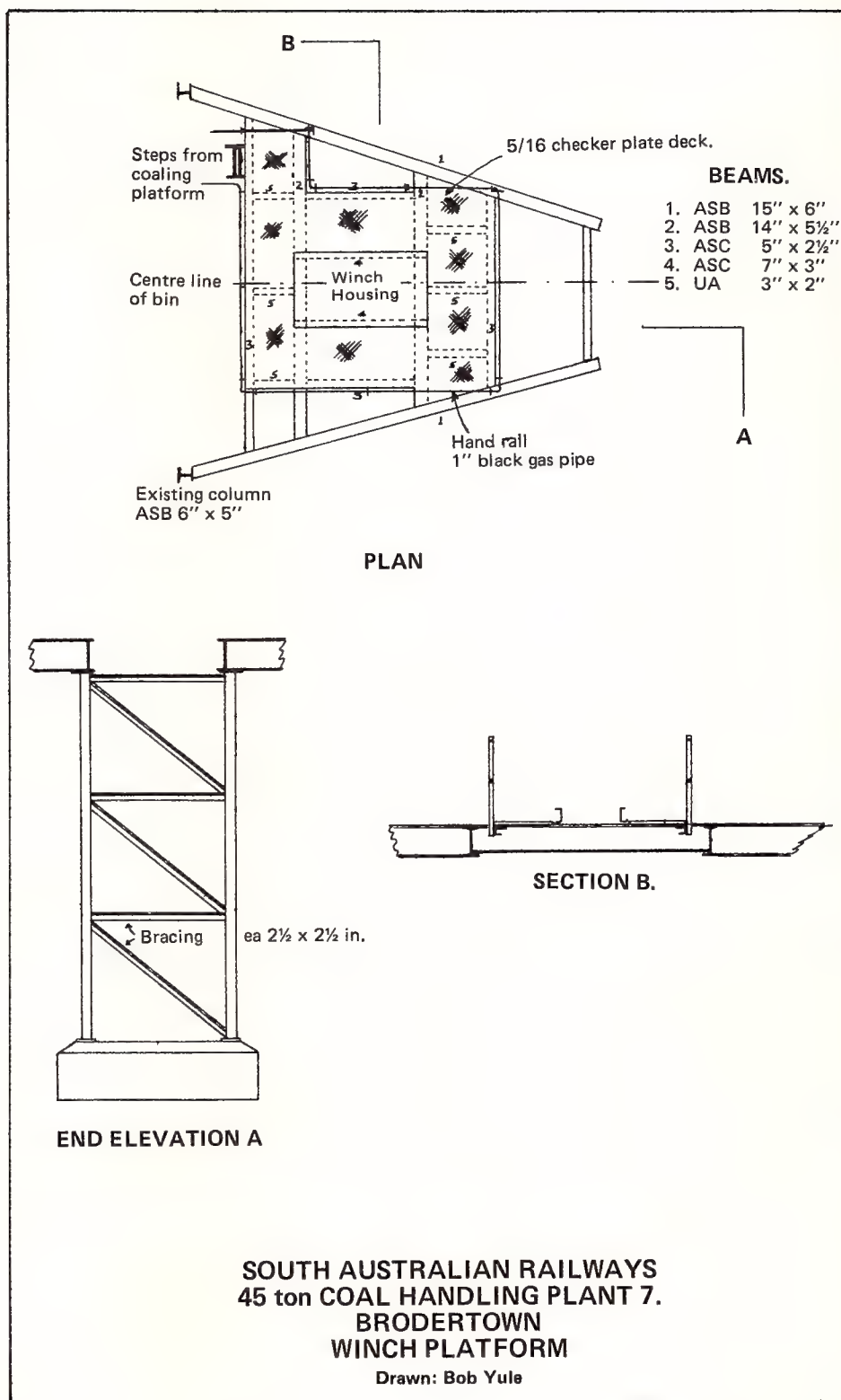
Pacific 601 is about to take coal at Bordertown whilst its train of open wagons loaded with sawn timber trails off into the distance. The winch platform raised above the passing siding is visible to the left of the tower while an H class coal hopper is over the unloading bin. Photo from Ron Stewien's collection.





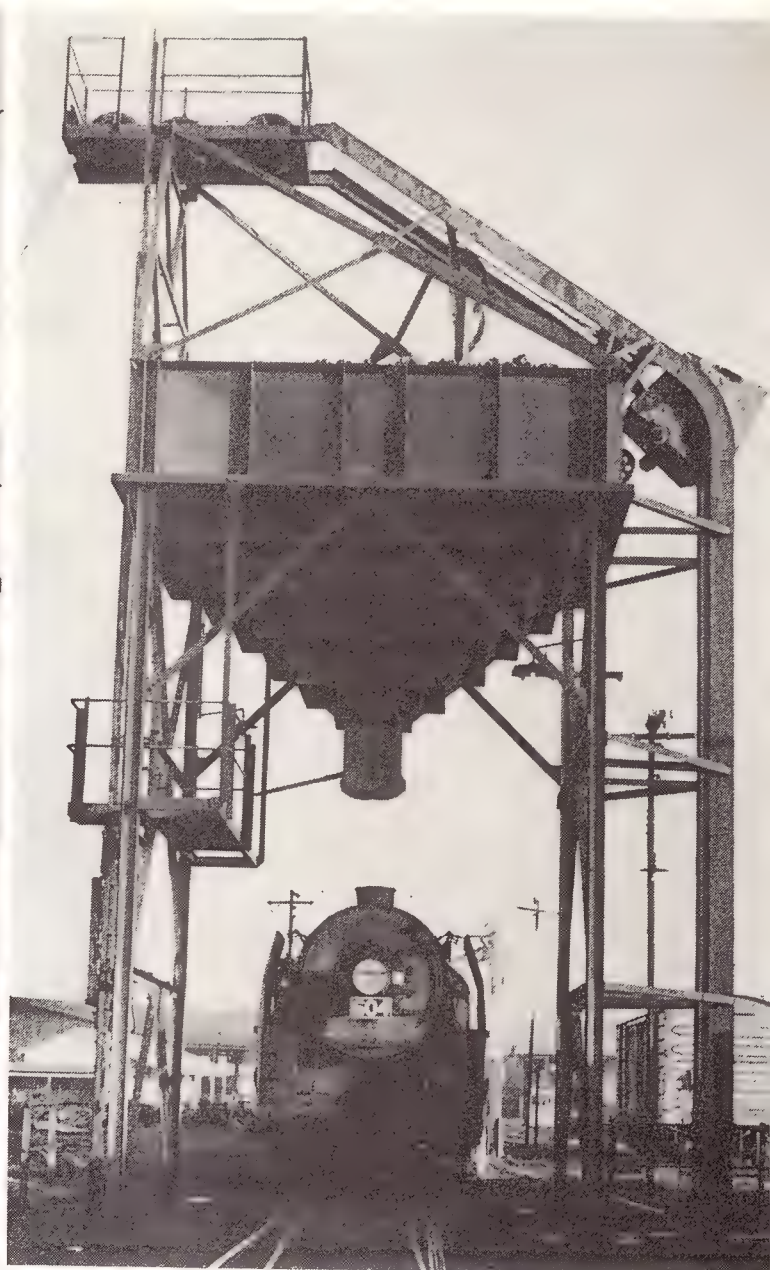


Drawn: Bob Yule

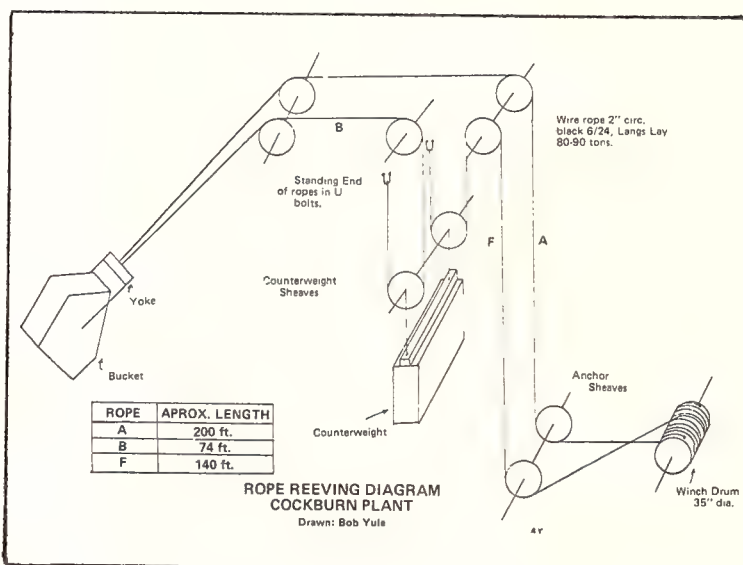
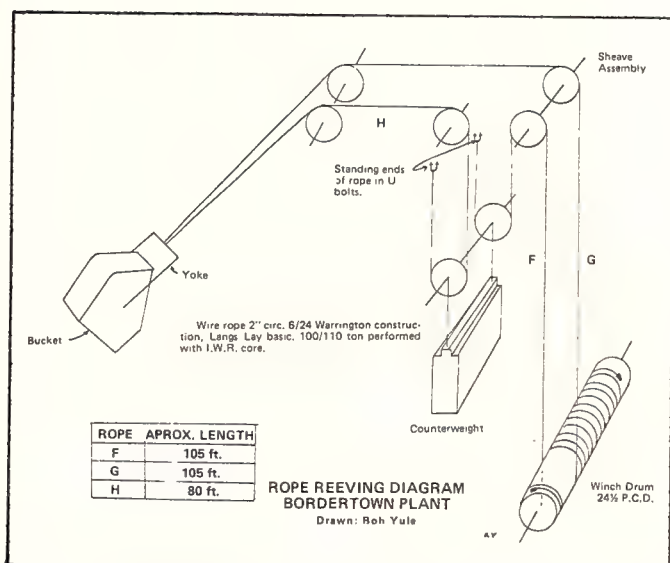




Streamlined 4-8-4 engine 531 beneath the coaling plant at Nara-coorte. The counterweight is almost at the top of its runners. Note that the plant is built up on concrete pedestals. Both photos from the collection of Ron Stewien.



604 approaches the coaling plant at Mount Gambier in 1955. Note the small wheels on the bucket which are raised when they ride over the curved steel guides near the top of the tower so emptying the bucket. Photo by Ron Stewien.

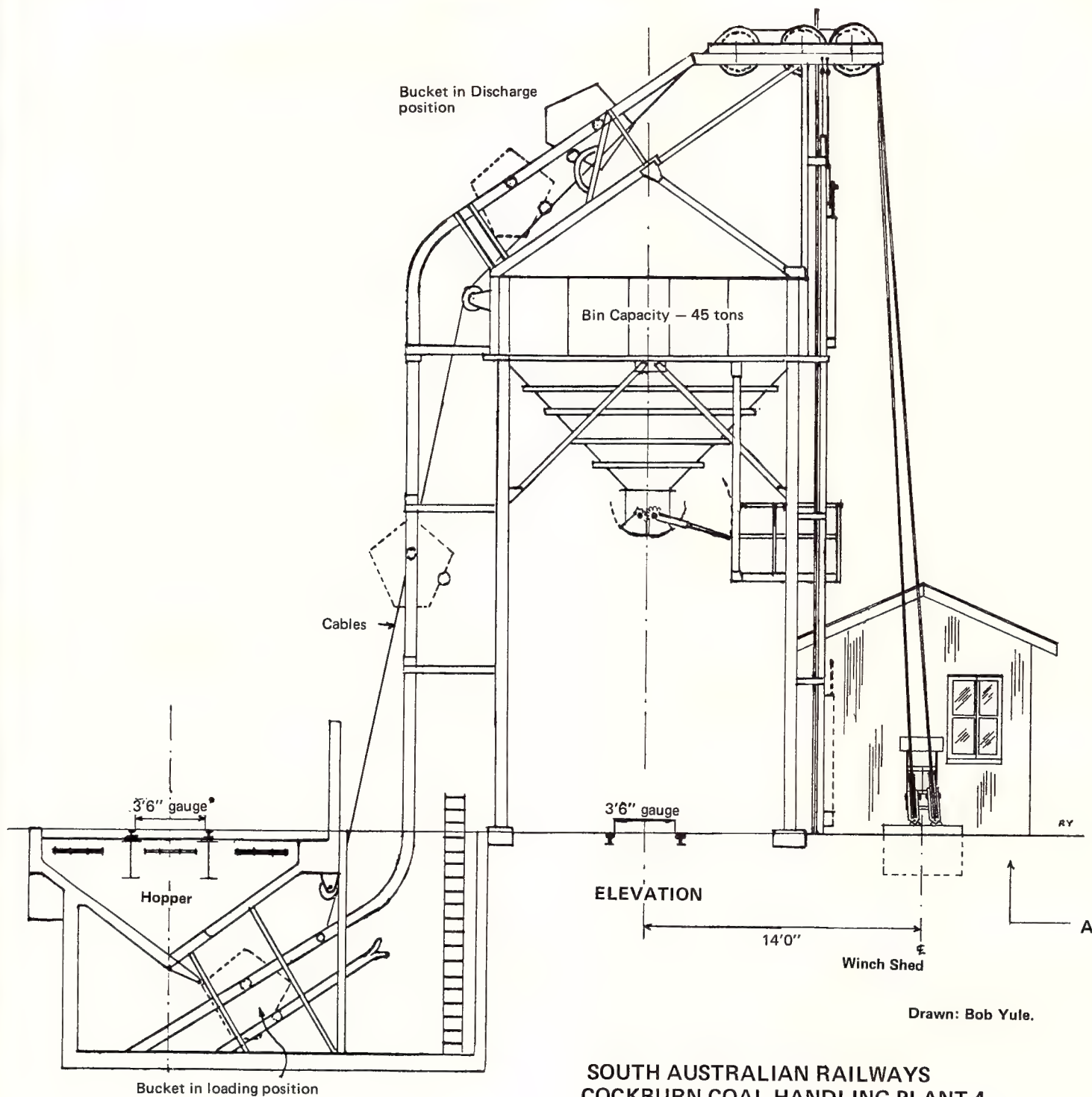




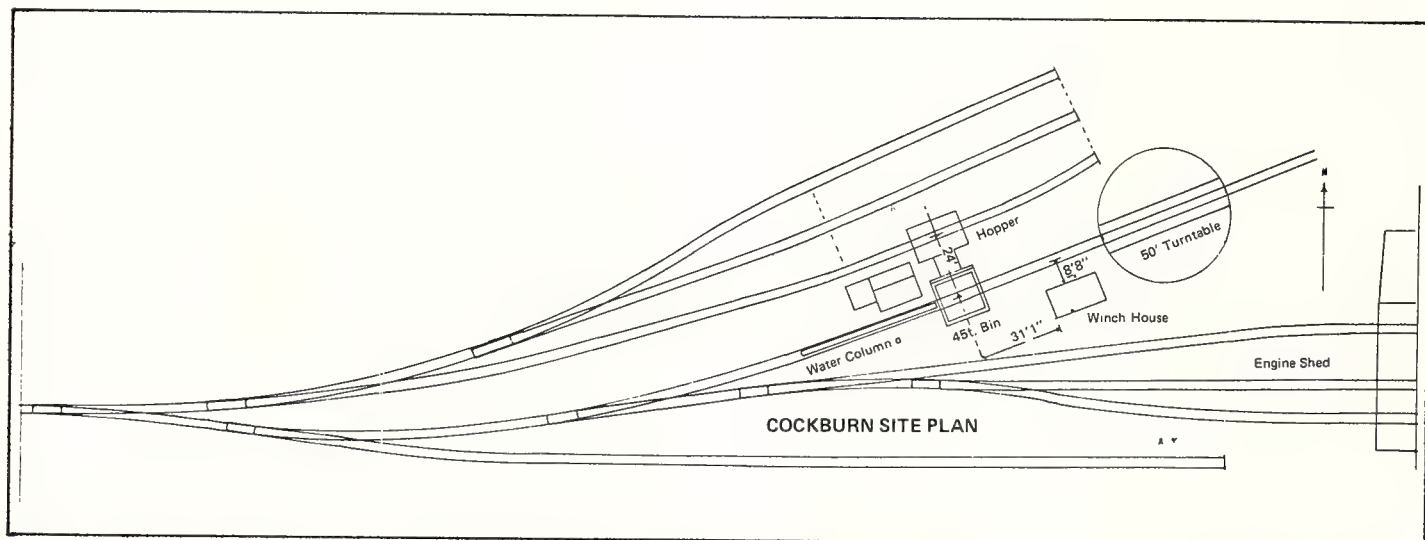
General view of the fueling depot at Cockburn in 1969 by Peter Fehlberg. The winch house is at ground level between the coaling plant and the overhead fuel oil tank. The turntable is in the right foreground.



A closer look at the base of the coaling plant showing the two pulley wheels that redirect the cables from the top of the tower, over two supporting rollers and into the winch house in the right foreground.



**SOUTH AUSTRALIAN RAILWAYS
COCKBURN COAL HANDLING PLANT 4.**





on the line to the Victorian border. The VR's Serviceton was only two stations away so the Bordertown plant was required for topping up engines on through trains. The plant was sited over the main line and had to allow a 16'3" clearance for broad gauge steam instead of the normal 14'6". In 1950 the passing siding was extended and as there was not sufficient room to go around the winch house the winch was raised onto a platform built over the passing siding. The diesel had replaced steam power on this line in the early 1960s and in August and September 1969 contractors C.J. Robertson & Co. Pty. Ltd. of Horsham (Vic) demolished the structure. The pedestals were removed in November 1969 and the last of the rubbish was removed in January 1970.

NARACOORTE coal handling plant was built approx 1950 and was commissioned in August 1952 to serve both broad gauge (5'3") and narrow gauge (3'6") engines. At this time the old narrow gauge system between Wolseley and Mount Gambier was being converted to the broad gauge under a 1949 Agreement with the Commonwealth Government. Gauge widening commenced in 1945, reached Mount Gambier in 1949 and was completed in 1955. In November 1970 Henschke Industries Pty. Ltd. of Naracoorte demolished the plant.

MOUNT GAMBIER coal handling plant was built in 1949-1951 to serve both broad and narrow gauge engines. With the removal of the narrow gauge in the early 1950s it was used only by broad gauge engines. It was demolished approximately 1970. More information about this conversion project is in the book 'One Rusty Rail' by Ron Stewien and published by the ARHS.

A 520 class approaches the coaling plant at Naracoorte. Note that ash pits are between the centred dual gauge rails on either side of the plant. An OB class bogie open wagon has just been unloaded into the bin judging by the open door.

1978 CANBERRA EXHIBITION

The 1978 Canberra Model Railway Exhibition was held at the Malkara Special School at Garran in early August 1978. Eight layouts featured along with seven trade stands, a Model Engineers display and a few stalls selling food and plants, the latter organised by the P&C Association of the school.

'Bargo', the Canberra based HO scale layout had its second airing and despite a scarcity of rolling stock showed the potential suggested at the 1977 exhibition. Bargo is a station (area) between Picton and Mittagong on the NSW main south rail line and was once the spot where assistance locomotives, helping haul the load up the grade from Picton, were removed from the train and in latter days where water was taken when the Picton water column was out of service. The layout features the dual track (code 70 soldered on P.C.B. sleepers), the Up and Down refuge sidings being included, although they were not operated or utilised during the exhibition, as well as the Bargo goods shed and sidings. The scenery was made from mixed methods and featured a coloured sawdust finish. As the Canberra Model Railway Club which is building 'Bargo' has only six or so committed NSWGR modellers the layout and rolling stock is a credit to all and no doubt as time permits the layout will be given more detail.

'Menangle', the HO scale layout exhibited by the Model Workshops group, visited Canberra for the second time and displayed some highly detailed scenes, including a new part-built house and a team of NSWGR track repair workers. A feature of this layout that seems to enchant the public is the shunting of the goods and milk siding and the variation and length of the trains, which include both steam and diesel motive power.

N.S.W. Western Districts is a HO scale layout exhibited by Kevin Brown and features train operation and scenery from the Blue Mountains of NSW. The deep cuttings are a feature on this layout that seems to get better, scenically, every exhibition.

Spokane, Portland and Seattle Railroad is a HO scale American layout exhibited by Bruce Lovett

which saw its introduction at the 1978 Chatswood exhibition. The layout features some beautiful mountain scenery and scenic effects, while the US steam and diesel motive force highlight the scenery.

The A.C.T. Model Railway Society exhibited two layouts, one being a huge HO scale US prototype style layout. A feature on this layout was the size of the trains behind the steam and diesel locomotives. The second layout was a large N scale display that showed European prototype models. This layout was very popular with the public.

Little can or has to be said about Norm Read and Col Shepherd's O scale layout for it has been around for years and no doubt will continue to enchant the public for many years to come. The lack of scenery is not noticed as the 'King' sized models pound the rails.

A definite feature of the exhibition is the Model Engineers display which showed most of the aspects in this side of the hobby. Working models were the norm, not the exception, and the highlight was the steam driven VW motor.

The trade stands, including Australian Model Craft, Locomotion, Bill Webb Mail Order, AMRM, ARHS, James Block and the Model Shop displayed their products to the public and modellers alike. The 'Grand National' model building competition was held in conjunction with the exhibition and although the overall support was not strong the standard of the models was very good. Model of the Competition was awarded to Laurie Evans HO scale NSWGR coal stage. Laurie incidentally won the same award last year with a model of a D55 locomotive; the unit featured in the May/June 1978 issue of AMRM. The layout award, this year judged by public vote, was won by the Menangle layout.

The exhibition was well attended with nearly 6000 members of the public passing through the door. This year the organisers encouraged modellers to attend a 'Meet the Modellers' barbeque on the Saturday evening and afterward visit some of the layouts of Canberra modellers. The gathering was well attended and the visitations gave modellers a chance

The advertising DEADLINE for the November/December 1978 issue is the 20th October, 1978. Please be early.

Do you find that your local dealer does not have some of the items under review? Then ask them to contact the dealers in the review and in our ads. Remember . . . tell them you saw it in A.M.R.M.

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to observe layouts that we only seem to see in overseas magazines.

The atmosphere of the Canberra exhibition is one of warmth and, while the organisers can continue to include this atmosphere at their annual exhibition, the Canberra exhibition will continue to be a fine show for the public and modellers alike.

Bob Gallagher.

When attempting to discuss the steam locomotives of the government railways of Tasmania, a writer will find one fact in his favour and one working against him. The good news is that there is a relatively small number of locomotives involved — there were more in a single class on some of the mainland railways (e.g. the VR DD class, the NSWGR D50, the QGR PB15) than the TGR owned in its whole life. The bad news is that TGR engines had a habit of just fading away, so there was sometimes an extraordinarily long interval between the last run of an engine and its final disposal: to give one example, B 13 last ran in 1935 but it was not written off until 1950.

Previous articles in this series usually comprised a table giving details of each class, with a chart summarizing the period of service of the more important ones. Because of the smaller numbers involved in this case an expanded text can take the place of the table. Unlike the other states, where there are usually books, or at least booklets, describing each class of steam locomotive, there is no comparable publication for the TGR, so this article will also give references to suitable photographs, whereas previously only drawings have received a special mention.

It might be useful to start with a list of books and periodicals to which reference will be made in the course of this article; the letters in brackets are the abbreviations which will be used later on to avoid the need for writing the titles out in full each time. References will be given in the form of the issue date for periodicals and the page number for books, except for "Railroading in Tasmania" where the plate number will be given. The word "or" between any two references signifies that the photographs are in fact identical.

"A Century of Tasmanian Railways" by H.J.W. Stokes, published by the Transport Commission, Tasmania, in 1961 is a 30-page booklet which provides a useful historical summary including a number of photographs. (CTR).

"Railways of Australia" by C.C. Singleton and D. Burke, published by Angus & Robinson, Sydney, in 1963 has only three photographs of Tasmanian Government steam locomotives, but it gives a complete list of locomotive classes in order of appearance. (RoA).

"Locomotives of Australia" by L. Oberg, published by A.H. & A.W. Reed, Sydney, in 1975 contains 19 photographs of TGR locomotives, each accompanied by about half a page of descriptive text. (LoA).

"Railroading in Tasmania", written by T.C.T. Cooley and published by the Tasmanian Government Printer is a rather unusual book. A number of chapters are devoted to details of accidents and other matters of only passing interest to the modeller, but the 200 photographs should themselves provide sufficient incentive to search out a copy. (RiT).

"A Pictorial History of the Railways and Tramways of Western Tasmania" by R.K. Aubrey, published by the OBM Bookshop, Hobart, in 1975 comprises 52 pages of historical photographs, with those of the North East Dundas Tramway being relevant to the Government Railways. (RWT).

"Along the Line in Tasmania — Book 2, Private Lines" from Traction Publications, Canberra City, is a 52-page booklet of excellent photographs, those of the Marrawah Tramway being particularly appropriate to this article. (AL2). I don't know whether Book 1 has been published yet, but as it is intended to cover the TGR it is obviously worth watching out for.

"South Australian Railways — Locomotives — Steam and Diesel Electric — and Rolling Stock", a 48-page booklet published by the SAR, includes details of some engines which found their way to the TGR. The yellow-covered edition (no date, but not the 1964 version) also includes weight diagrams and is the one to which reference should be made. (SAR).

"Australia's Garratt" by R. Buttrims, published by the Geelong Steam Preservation Society in 1975, is by far the most complete source of information about the Australian Standard Garratt, which the TGR knew as the G class, and also contains other relevant photos. (AG).

"Locomotives of the Commonwealth Railways" by Fluck, Marshall and Wilson publish-

STEAM ERA — Tasmania

Ian Cutter lists and describes the steam locomotives used on the Tasmanian Railway system.

Class	1880	1890	1900	1910	1920	1930	1940	1950	1960
B									
C									
CC									
CCS									
A+									
B+									
C+									
D+									
E+									
F									
A									
D									
A									
Ab									
E									
L									
M									
P									
T									
Q									
R									
DS									
G									
F									
H									
M									
MA									

ed by the Mile End Railway Museum in 1972 includes some engines which passed to the TGR from the CR. (LCR).

The most important periodical is the monthly Bulletin of the Australian Railway Historical Society. (ARHS). Items which were of particular value in the preparation of this article were: "Locomotives of the Tasmanian Government Railways, List of Engines in Order of Appearance" (9/46), "Smithton to Marrawah Railway" (11/51), "A Brief History of the Garratt Locomotive in Australia" (2&3/53), "Railways of the Zeehan District" (10&11/63), "Loco-

motives of the Tasmanian Main Line Railway Company" (1&5/65), "The Decline of Steam Power on the Tasmanian Government Railways 1945-1965" (9&10/66, 9/70), and "Tasmanian Government Railways Steam Locomotive List" (supplement 2/73).

Another periodical is "Light Railways", published quarterly by the Light Railway Research Society of Australia. (LR). Useful articles are "Locomotives of the Marrawah Tramway" and "Locomotive List of Tasmanian Main Line Railway Company" (Spring 1972) and "Hagan's Patent Locomotive" (Autumn

1973).

The Australasian Model Railroad Magazine, which you are now reading, has also published some useful plans.

Having got the preliminaries out of the way, we can now turn to the railways themselves. The Launceston and Western Railway, built to a gauge of 5'3", was opened between Launceston and Deloraine in February 1871, but financial difficulties led to its being taken over by the government in the following year. The Tasmanian Main Line Railway Company opened its 3'6" gauge line between Hobart and Western Junction in December 1875, and by the following November trains were running through to Launceston. In 1885 the government began operating its own railways and also converted the L & WR to 3'6" gauge.

The locomotives listed below are generally given in order of appearance of the first member of the class, as given in the list in ARHS for September 1946, although in fact the first engine to be mentioned is not included therein.

The TGR started in 1884 with an engine which was a conversion of a Sharp Stewart 0-4-0ST from the abortive 4'6" gauge Mersey and Deloraine Railway (ARHS 10/70). It probably was not used in revenue service so I do not think it need concern us further. In 1885 the government acquired a Baldwin 0-4-0ST from a contractor and in 1902 sold it again. Another contractor's engine, A Hudswell Clarke 0-6-0T, had an even shorter period of service, being sold in 1895.

The first engines ordered specifically for the TGR were the 15 B class 4-4-0's and the 18 C class 2-6-0's which were delivered by Beyer Peacock in 1885 — a further 10 of the C class were delivered later. The B class last saw service about 1952 and were all scrapped by 1960, with B4 lasting until late 1959 as a steam cleaner. (Photographs LoA 50 or RiT 128, ARHS 9/66). The AMRM for March/April 1977 had an HO-scale drawing along with three photos: it is sobering to note that one of these is the same as the first two mentioned previously — there are not as many photographs available of these old engines as would appear at first sight.

The C class have a more complex history. Over the period 1912-16 six were rebuilt with enlarged Belpaire boilers and extended smokeboxes, and re-classed CC. During 1924-28 a further four were similarly rebuilt with the addition of superheating and Walschaerts valve gear and classed CCS. The C class were last used in 1964 and the CC in 1965, but CCS23 survived, painted red, to take part in the TGR centenary celebrations in 1971. (Photos RiT 129, 130, 131; LoA 57, 58; ARHS 9/66, 6/73). In 1890 there was an influx of fifteen locomotives, of six different classes, as the Tasmanian Main Line Railway Company was taken over by the government. They were classed alphabetically, starting with A, but to avoid confusion with pre-existing classes the first four were distinguished by a + suffix to the class letter, and this practice was extended to the E class in 1907.

The lone A+ class 4-4-0 was transferred to the isolated Bellerive-Sorrell line in 1905, although it did not see a great deal of use, and it was scrapped after the line was closed in 1926. There were three B+ class 4-4-0's which lasted until 1929, but they probably were last in service about 1922. The four C+ class 4-6-0 engines were all sold by 1937, but 1928 would be a reasonable guess for the last year of service. The two D+ class 4-4-2T engines were confined to the Sorrell line until its closure in 1926 and were scrapped soon after. (It is interesting to note that these two engines, like the E+ engines transferred to the West coast, retained the old TML centre buffers and were used with ex-TML rolling stock.) There were 5 of the E+ 4-4-0's and these spent most of their life on the West coast: they were probably not in service after 1921 although the last was not scrapped until 1929. The sole representative of the 4-4-0 F class was sold in 1914, but it may have had very little use even before that date. Anyone interested in the TML locomotives should see the ARHS Bulletins for January and May, 1965. Apart from one photo of a B+ class (RiT 11 or AL2 44), these articles seem to have exhausted the supply of photographs of

these engines. (Some relevant photos also appear as RiT 10, 13, 14, 16 & 48.)

The year 1891 saw the introduction of the sole A class 4-2-2 which had previously been a broad-gauge 2-4-0 of the Launceston and Western Railway Company. A picture of this engine, with about two dozen railwaymen posed to obscure as much detail as possible, appears as plate 4 of *Railroading in Tasmania*. The engine was scrapped in 1929, but the actual date of withdrawal from service is unknown; the usefulness of a single can be estimated by anybody with even a passing knowledge of the TGR, and this is confirmed by the fact that the engine spent a great part of its life sitting outside Launceston paint shop.

In the same year four D class 2-4-2T engines were introduced for shunting and for suburban services out of Hobart. They were last used for shunting in 1951, but D2 was subsequently used for steam cleaning and not scrapped until 1959. (Photographs ARHS 9/66, RiT 132.)

In 1892 the TGR introduced its sixth class of 4-4-0 engines with the arrival of six Beyer Peacock A class engines for use on main line expresses. (Photographs LoA 76 or RiT 91, CTR 14.) A further two, along with an extra D class, were delivered later. The A class were displaced from their most important duties on the arrival of the M class Garratts, but the rebuilt version with the Belpaire boiler and extended smokebox was in turn able to displace the Garratts.

The rebuilding began with A2 and A4 in 1908, although the last conversion, that of A7, was not carried out until 1946: the rebuilt engines were officially classed Ab, although the suffix did not appear on the engines and eventually fell into disuse when all had been converted. These engines were last in service in 1954. (HO-scale plan and photographs AMRM July 1976; photographs ARHS 9/66, LoA 67 or RiT 92, RiT 125, 126, 127, CTR 16.)

The next class acquired by the Government Railways was for their 2' gauge system, and it is convenient to depart from a strictly chronological treatment and deal with all the narrow gauge engines together. The history of this railway system is summarized in an article entitled "Railways of the Zeehan District" which appeared in the ARHS Bulletin for October and November 1963. (See also Nov/Dec 1977 issue of A.M.R.M. Ed.)

For construction purposes a 6½ ton Krauss 0-4-0WT was bought second-hand in 1896 and a further two were obtained the following year. Along with another bought new in 1899 these became the H class. H2 and H3 were sold in 1906 and H4 followed in 1927 while H1 just faded away, its remains being visible long after the last train had run. (Photographs LoA 71 or RiT 39, RiT 40 or 139.)

Two new Sharp Stewart 0-4-2T engines, built in 1896 and 1898, were purchased for operating the North East Dundas Tram. The first of these G1, was destroyed when its boiler exploded in 1899, and was replaced by an identical engine the following year. On the closure of the system in 1933 these engines were sold to the Central Isis Mill at Cordalba, but the presence of the Garratts after 1910 and the decline in traffic at the end of the 1920's would probably have restricted their use toward the end. (Photographs ARHS 11/63, LoA 89 or RiT 38 or 136, RiT 34, RWT 29, LR Spring/72.)

The year 1901 saw the arrival of the only J class engine, a Hagen's Patent 2-6-4-0T. One can only marvel at the ingenuity shown in transmitting power to the second set of driving wheels — a brief explanation is given in "Articulated Locomotives" by Lincoln Weiner (republished by Kalmbach, Milwaukee, 1970). It is said that because of its weight it played havoc with the light rails, but there is probably more to the story because the axle load was less than that of the subsequent K class. Whatever the reason it probably didn't see much service after the Garratts arrived in 1910. (O-scale drawing and photograph LR Autumn/73; photographs LoA 96 or RiT 45; photo and weight diagrams ARHS 11/63.)

The two K class 0-4-0 + 0-4-0 Garratts entered service in 1910. Not only were they the first Garratts in the world but they were most unusual in being compounds with the cylinders at the inner ends of the engines.

This class remained in service until the closure of the system. Two very good drawings have been published: the magazine "Engineering" for December 10, 1909 had a sectioned plan and elevation to a scale of ½" = 1', along with some photographs taken before final assembly, and a 00-scale drawing appeared in "Model Railway News" for June, 1966. (Photographs LoA 114, RWT 30, ARHS 11/63.)

Returning now to the main system, two E class 4-6-0 engines were obtained for goods work from Beyer Peacock in 1907 and served until 1961. (Photographs ARHS 9/66, RiT 134.)

In 1912 the TGR took delivery of four Garratts from Beyer Peacock, two each of the 2-6-2 + 2-6-2 L class and the 4-4-2 + 2-4-4 M class. The L class operated from Launceston on goods trains until they were withdrawn in 1937, but the wartime locomotive shortage led to their being returned to service from 1943 to 1945. (Weight diagram ARHS 3/53; photographs RiT 106, 109, 141 or AG 6 or LoA 119, CTR 15.) The M class were unique in being 8 cylinder simple expansion locomotives. They were withdrawn in 1931, and although not scrapped for another 20 years they were not recalled to service. (Photographs RiT 28 (or LoA 118), 31, 86 or 142, ARHS 3/53, "Articulated Locomotives" 172.)

Following the entry into service of these Garratts, no new classes of engines were introduced for a further 9 years, and when they did arrive in 1921 they were actually second-hand. The P class comprised a single 2-6-2T which had been built two years before by Clyde for the Mayer's Point timber tramway near Newcastle. This engine worked for some time on the Melrose branch and then at Launceston, being last used about 1941. (Photograph RiT 145.) The six T class 4-8-0's were obtained from the South Australian Railways, apparently being surplus to requirements. They retained their SAR numbers, in the range 219 to 237, which looked a bit odd in comparison with the other TGR classes where the numbers usually started from 1. A number of minor changes were made, the most obvious being that the funnels were altered, but to an elongated flowerpot style rather than the SAR stovepipe. The TGR engines did not have the pressed-steel cowcatcher, enlarged tender or Westinghouse compressor to the left of the smokebox, and without the compressor they did not need the silencer behind the funnel. The TGR was never quite able to match the SAR in the number of miscellaneous items cluttering up the running plates of these engines. This class last saw service in 1961. (Weight diagrams SAR 21 or LCR 40; photographs RiT 112, 113 (or LoA 101), 148, ARHS 9/66, 10/68.)

The next year saw the delivery of six Q class 4-8-0 locomotives from Perry Engineering of Adelaide, and a further 13 were obtained later from other builders. They were the most important freight locomotives until the advent of the diesels, and were later used to some extent on suburban passenger trains. The last one in service made its final journey early in 1964. (Photographs RoA 73, LoA 135, RiT 146, ARHS 10/66.)

In 1923 Perry delivered the four R class Pacifics which took over most of the main line passenger trains. In 1937 the fourth member of the class was streamlined, a bit like a miniature VR S class, but the streamlining was removed after the war. These engines were displaced from the main line passenger trains by the X class diesel electrics, beginning in 1950, but they survived on less important duties until the end of 1957. (Photographs LoA 136 or RiT 84 & 85, ARHS 9/66.)

In 1929 a number of locomotives were added to the register when the Marrawah Tramway, in the North-west of the state, passed into the hands of the TGR. A general account of the tramway was given in the ARHS Bulletin for October and November 1951. Details of the locomotives are given in the latter article and amplified in "Light Railways" for Spring 1972, which has photographs of two of them, "Big Ben", a Baldwin 0-6-0ST, and "Spider", an 0-4-0T rebuilt from a tram motor. Another photo of Big Ben appears as plate 116 of "Railroading in Tasmania". The two other engines were "Fantail",

a Baldwin 0-4-0ST, and "Six-wheeler", a Hudswell Clarke 0-6-0ST. (Photographs RiT 120 and AL2 46, respectively.)

Unfortunately, "Railroading in Tasmania" lists two Hudswell Clarkes named "Six" and "Miss Perth", which were 0-6-0T and 0-6-0ST engines respectively, and moreover gives photographs of each as plates 117 and 118. "Six" sports a built-up cowcatcher at each end, which seems a bit of an affectation considering the company she would have kept. Both are said to have been sold in 1929, so they would not have seen any service with the Government railways. If I had to reconcile the conflicting evidence I would forget about "Six" and assume "Miss Perth" to have been "Six Wheeler". This suggestion is based on the similarity in buffer beam, valance, side tank cab sheeting and numberplate, while conceding that there are differences in springing, brake blocks and funnel.

"Six Wheeler" was written off in 1938, "Fantail" in 1946, and "Spider" and "Big Ben" in 1948. Apart from the latter, which spent part of its last year on the Oatlands branch, all remained confined to the tramway

in TGR days.

In 1939 the TGR put into service four NZR Wf class 2-6-4T engines, which it classed DS, and purchased another four in 1944. These engines were mainly employed hauling suburban passenger trains and shunting: they were last used on the TGR in 1949, although DS 1 and DS 5 were sold to the Mount Lyall Mining and Railway Company and DS 7 was used for steam cleaning at Devonport until 1957. (Photographs RiT 133, ARHS 10/66 or "Register of New Zealand Railways Steam Locomotives" 116, AL2 34.)

The Australian Standard Garratts arrived in 1944, and after the first allocation of eight locomotives a further six were bought from the QGR. These G class engines were last used toward the end of 1957, although one sold to the Emu Bay Railway Company lasted about six years longer. (Photographs RiT 21, 137, but preferably AG which also has a 0-scale drawing.)

Four F class 2-6-0 engines entered service in 1949. They had previously been Commonwealth Railways Nfb class which had been SAR Yx class which had been converted from

Y class engines built about 1890. The last was withdrawn in 1957. (Weight diagram LCR 38 or SAR 22, photograph LCR 39 or RiT 135.)

We now arrive at the last generation of TGR steam locomotives. The year 1951 saw the introduction of two green-painted classes, in the form of four (ultimately eight) H class 4-8-2's and ten M class Pacifics. In 1957 four of the M class were rebuilt with smaller driving wheels from scrapped ASG's and reclassified as MA: these were painted red, as were three of the H class. These classes were responsible for the bulk of steam working after their introduction, so quite a number of photographs have been published in addition to those listed here. (Photographs: H class, LoA 194, RiT 138, ARHS 10/66; M class, LoA 196, RiT 107 or 143, CTR 30; MA class RiT 144, ARHS 10/66, AG 67.)

This article is intended to cover the period up to 1965, so to round it off here is a list of those steam locomotives which were serviceable on 15-3-66; CCS 23, 25; H 3, 5, 6, 7, 8; M 3, 4, 5, 6; MA 1, 2, 4.

THAT'S LIFE

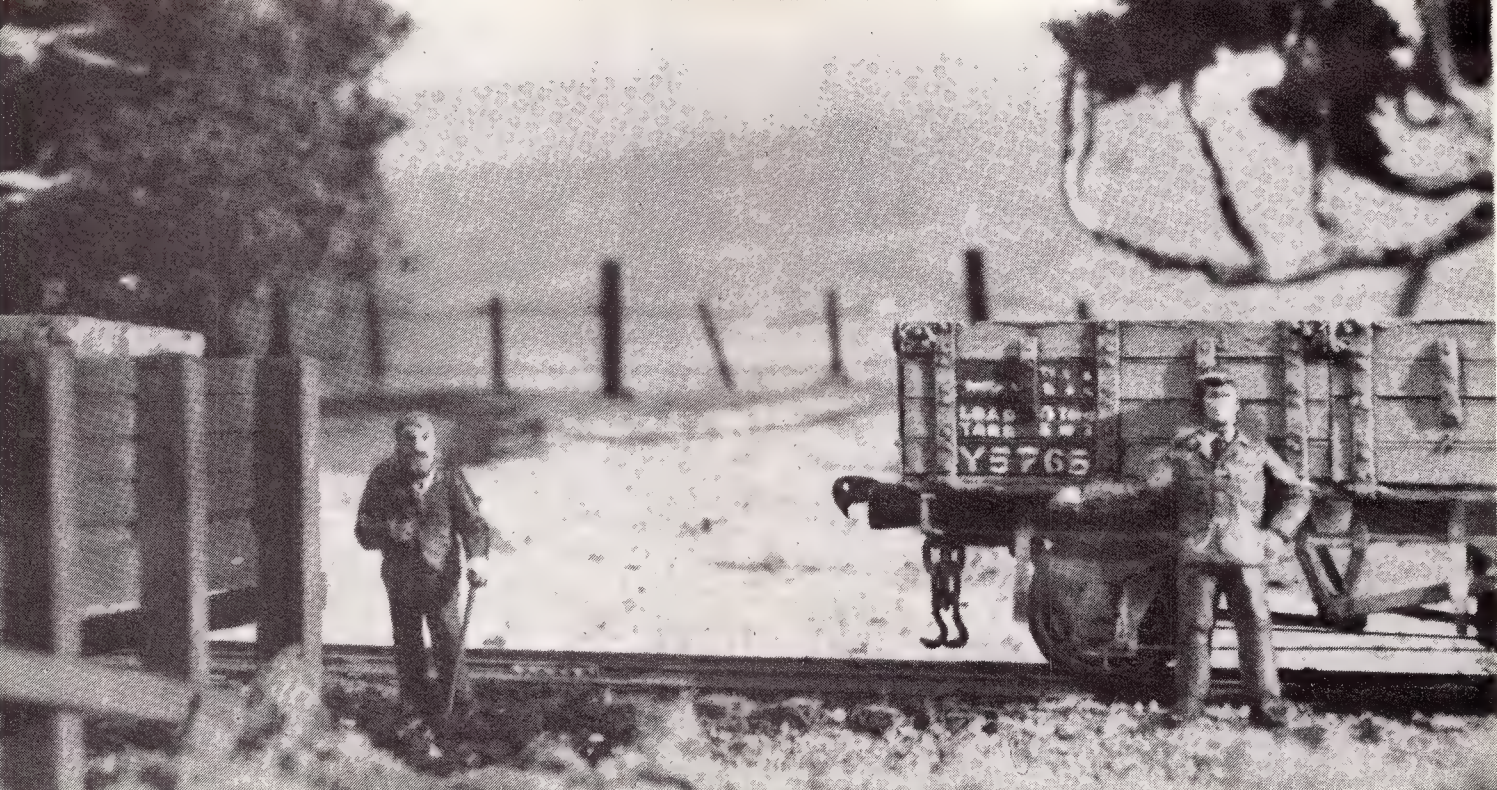


This photograph is printed just for the modeller who wishes to add a little realism onto the layout. Note the three styles of grain elevators and the typical N.S.W.R. station building. The goods shed has that wind swept look. Dave Flanagan took the photo at Lake Cargelligo.

MODEL TRAMCARS



These two model photos are of (left) a Brisbane FM car and (right) another Brisbane car, this time the "Drop Centre". The models are being built to a 5/8" - 1" scale and are intended for static display only. The modeller and photographer is B.J. Burnes, of Stirling, A.C.T.



SAR narrow gauge station staff posing by the coal stage in front of polyester resin moulded Y class open wagon on Peco steel chassis.

INTRODUCTION TO THE THREE MILLIMETER SOCIETY

— 3'-6" Gauge Modelling in HO —

Ross Hurley

British TT Scale is a round figured reduction from the prototype of 100:1, or 3 mm to the foot, and uses a track gauge of 12 mm. TT scale elsewhere in the world is the more correct 120:1, but the gauge of 12 mm is universal. In HO scale this measures 3'-5.1/8", hence is a ready made gauge for HOn3½. Because narrow gauge rolling stock in Australia was generally much smaller than their standard gauge counterparts, TT scale equipment is often about the right size too.

In Britain it is very much a minority modelling scale though, and pretty much of a closed shop at that, especially if one wants parts — unless one joins the 3MM Society. A small range from a handful of manufacturers is available from 3MM Scale Model Railways but most of what is available in this scale is made

for the 3MM Society, and sold to members only. What's in it for HO modellers in Australia wanting to model 3'-6"?

For a subscription of £2.50 a year, about \$4 Australia, one has access to a considerably wider range of wagons and coaches, some locomotive kits, wagon underframe kits, a range of bogies, and, importantly, an array of beautifully made driving and bogie wheels. In addition to the availability of parts, one gets a copy of their quarterly magazine "MIXED TRAFFIC", and their more frequent Newsletter, posted airmail, where one learns of more products coming up, the availability of limited production runs, and general advice on running on 12 mm gauge track.

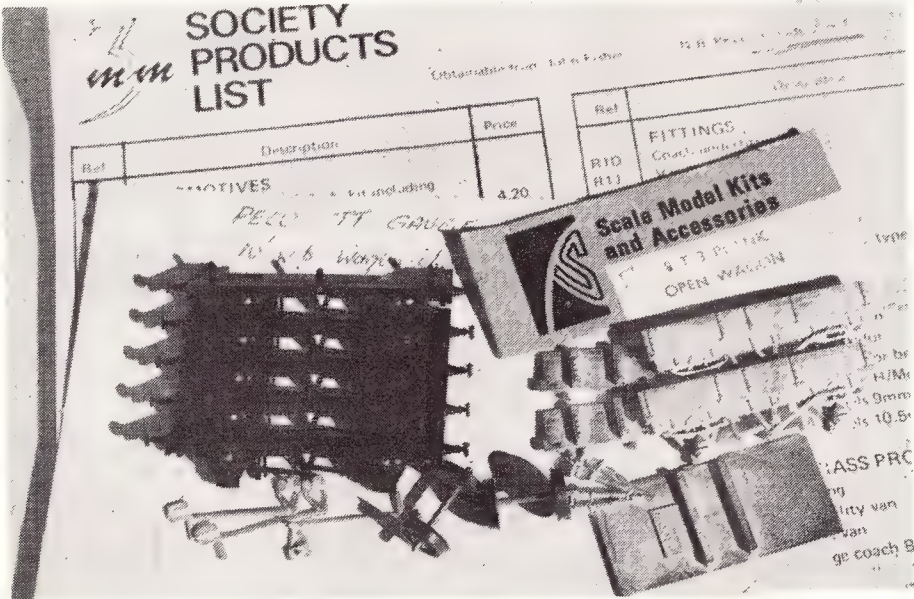
One thing the Society won't give you is a set of standards for 12 mm gauge, something I

found more than a little surprising, but the Society is working on it. One is left with either NMRA or AMRA TT standards, which are fine, except that the absence of advice from the "official voice" in Britain so far, has left the manufacturers free to make their own, resulting in some astonishing basic variations. As an example, the otherwise fine looking Peco 9 mm spoked wagon wheel pair has a back-to-back dimension that scrapes the rock bottom limit of AMRA gauge tolerance.

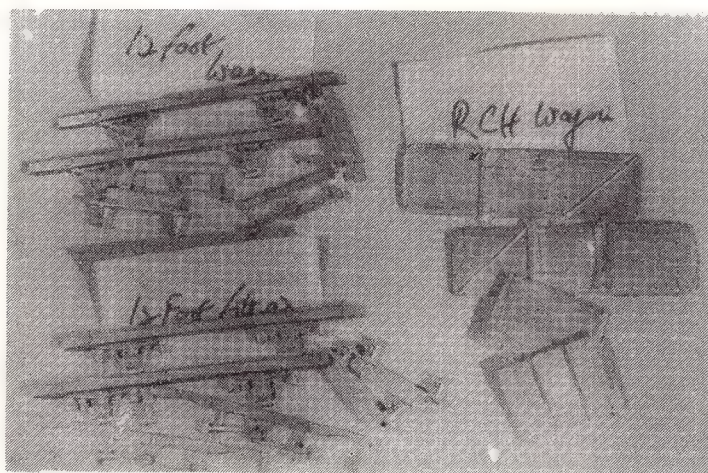
What's the stock like? The kits are made in a variety of ways, so the quality varies too. The Society commissions manufacturers to make special runs for them, sometimes to patterns made by members. A lot of the wagon kits are made fully by members themselves from their own patterns and moulds — characteristic of the mutual-help style of Australian prototype modelling here at the moment. So the quality varies from very good, to some, which, for want of better initial pattern making, are not worth the trouble getting.

What's really available for the HOn3½ modeller? The wagon and coach kits will not be much good unless they approximate the shape and appearance of local prototypes. Speaking for SAR narrow gauge, K's LMS 3 plank open wagon is certainly a model one can use as is, and the LMS cattle wagon and SECR tarpaulin wagon could also be used with a few modifications. From a superficial observation the Society 8 plank RCH Standard open wagon seems about right for the common WAGR coal wagon too. These kits are white metal and are of a reasonable quality. And for those with eyes sharp enough to spot the two Great Western looking brake vans in the ARHS (SA) book "Rails to the Burra", on the narrow gauge tracks of Hamley Bridge in the 1920's, there's probably a useful brake van too.

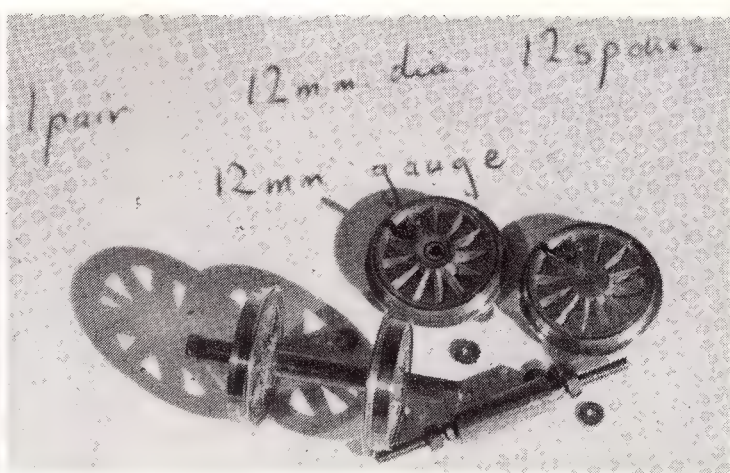
Wagon underframe kits and 12 mm gauge wheels are certainly useful for 3'-6" gauge modellers. Peco make (for the Society only) two wagon underframe kits, with a quality of detail that matches their 00 Wonderful Wagons. One is a wooden underframe kit which scales (in HO) 14'-0" by 6'-9" around the solebars, with a 7'-9" wheelbase, and the other is a



Peco 10'-0" w.b. steel chassis components; a K's 3 plank open wagon kit; and some Jackson 9 mm wheels.



3 mm Society whitemetal wagon underframe parts (10'-0" w.b. in HO) and RCH Standard wagon kit.



A pair of 12 mm dia. driving wheels, and a pair of similar size bogie wheels assembled on axle. The ingenious method of assembly allows wheels to be pushed onto axle squarely by screwing nuts and spacers onto the overlength axles, which are then cut off flush when the glue has set.

steel underframe kit which measures 14'-9" by 7'-0" on an 8'-6" wheelbase. Because of their split-half construction they can in fact be made wider than these dimensions.

The Society make two whitemetal underframe kits on 10'-0" wheelbase which, at least for the samples I obtained, are not of very good quality. The initial pattern making was quite course and I didn't consider it worth purchasing more.

There are a variety of 9 mm dia. wagon wheels available in and out of the Society, but the finest wheels of them all, Jackson's metal disc wheels, are available from the Society a lot cheaper than outside. They are really the only ones worth getting as the others, all nylon or plastic, vary in shape and flange profile from fair to some which, quite frankly, would put a boater hat from the Roaring Twenties to shame. A wide range of bogies and axleguards are carried, from which it may be possible to select some near-alike Australian patterns.

For locomotive scratchbuilding a member of the Society makes for them a range of driving wheels, with or without crankpins fitted, of a quality of design and finish that rate at least as good as the best 00 gauge wheels manufactured in Britain. There are six sizes which range from 12 mm dia. up to 20 mm dia., in 1.5 to 2 mm steps, and with varying numbers of spokes within each size. Similar quality tender and

bogie wheels are also available.

As befits an organisation with so wide a range of products, it has a well organised sales system. Different members around Britain are responsible for different groups of components, but overseas members send their requests direct to the overseas representative, who arranges for the shipment of everything.

Regular overseas buyers will have their own methods of sending for orders, but my favourite way is to balance my requests out to eight or nine pounds, and buy a UK £10 note from a travel agent that exchanges foreign currency. That will cost you about \$17; unless you do it through a bank when you'll likely be charged an additional 50c "exchange" fee. An overseas bank draft is dearer again — that will cost you a dollar extra. And if you're thinking that you can get an overseas money order from a post office then maybe you haven't seen what the Post Office charges for that service. It's obviously designed to stun you into insensibility so the counter clerk has time to pore through his book of British Post Offices looking for the one that is closest to the UK address you're supposed to have been thoughtful enough to bring with you.

Surface postage for parcels of around 1-200 grams will cost you about 50p, but I always allow much extra for postage and request that the balance, if any, be made up with some

small items, such as wheels. Postage stamps are also useful to make up the order with. Having some on hand makes it a lot easier when requesting information from a British model dealer. As SSAE is a little impractical for us here but including some stamps in your letter goes a little way towards helping. Shipments take around three months to come, sometimes longer if you have a wide variety of items the overseas representative has to collect before he packages it all up.

All Society prices include Value Added Tax (VAT) which doesn't apply to overseas orders. However the Society ignores the inclusion of VAT in its prices for overseas members. There are two reasons for this. Firstly, when VAT became applicable, about two years ago, the Society decided to stand part of the VAT itself so as not to increase prices too much, and secondly, overseas members get the Mixed Traffic and Newsletter posted airmail at no extra charge, a convenience I'm happy to pay "VAT" for.

So there it is. If you're a 3'-6" gauge modeller in HO, you will already be doing your bit of scratchbuilding, and scrounging for suitable parts where HO gauge components cannot be used. Society membership can make this a lot easier.

MATES

The model railway hobby has many good aspects that foster enjoyment, but few of them could better the friendships found with other modellers. There is, however, a special brand of friend and for the purpose of this article he will be known as "Mate". Loners represent quite a large proportion of participants in this hobby and I am not suggesting that they do not get full enjoyment from the hobby but it is a "cert" that they miss out on some of the more humorous and trying times.

The mates being mentioned are not the acquaintances (for want of a better word) one forms at association or club level but one with whom a special bond is formed — the one who you see regularly, venture on field trips and build models with. There can, and usually is, more than one, and if a group of mates exist, the enjoyment can be shared and doubled. In most instances you can speak freely and honestly with your mate; the only subject left alone being one's immediate family. You can tell him to his face that his models are useless and not get kicked in the face, but you must expect to take as good as you give, in verbal debate. So what's so special about mates in model railwaying you ask. Quite right, they can be found in any walk of life, but within the hobby the enjoyment is tenfold.

A mate has special attributes which, hopefully, I will describe with a little detail.

A mate is the sort of person who helps you with a project. He will sit and watch you work, knowing that you have made a mistake, and not tell you until it is virtually finished, but he will

rectify the fault for you.

A mate encourages you to commence a project, usually knowing that you are seeking a photograph to detail the model. Once the photo is available he quickly details his own model and flashes it under your nose before your own is even started.

A mate will share a secret — with everyone else. Most modellers want to have something that others do not have, but the mate who is accompanying you to the hobby shop watches you like a hawk, and then pumps the information out of you. Naturally he tells all and sundry what you are up to and they buy the same components and again, in most instances, complete the model (and wave it under your nose) before you start. This situation can have a humorous side effect, for in most instances the mate either waits till you enquire or purchase the item first. If the item is not available he will, if he gets a chance, quickly ask for the same item at the next stop on the hobby shop crawl. This usually means you have to be quick to get out of the car and into the shop for it is "odds-on" that there is only one available. Of course it is possible to lay a trap for your mate if he is a little unwitting. You simply enquire about a product that is not available at the first shop and quite freely tell your mate what it is for. When he is first to obtain the item, you (making sure there is a free exit) quietly tell him that he has been "conned" for in fact the part and proposed model are purely a figment of your vivid and crafty imagination.

A mate can help you obtain the model you have saved-up for years for. Usually it is a brass loco and by coincidence the last available. However, you err and advise all your mates that you aim to purchase it the next day. Morning comes and you stroll to the shop only to find one of your mates with it in his hand, admiring it lustily. Fortunately he is short of funds and you leave the shop, model in hot, clammy hand, vowing never to slip again.

A mate is very helpful in a conspiracy. Most modellers will understate the price of a loco or indicate that a brass unit is plastic so that the boss of the home, apron strings and all, does not know the truth (so we think). Your mate will assist in the conspiracy by helping with the little white-lie until he wants to swap a model, which of course you refuse. (It happens to be one of your best models for some piece of his junk.) you then find him accidentally dropping the correct price and the length of time that you have had the model, well within earshot of the "missus".

There is also the chance of helping your mate with details of a model he wishes to make, for the details and photos you have are to share with him — but trying to get a look at his collection of details and photos is harder than becoming Prime Minister.

Despite all these good points I would not be without my mates and recommend to all modellers to seek them out. There is never a dull moment.

Bob Gallagher

A RAIL OUTING FOR A SMALL CLUB

Although boasting less than twenty active members, the Goulburn Model Railway Club boldly hired two CPH rail motors for a special outing to Crookwell on July 1.

Staged to raise funds for layout control units, the response was so great that station platform seats were needed in the two units' guards compartments to accommodate the overflow!

Actually, the tour began earlier that morning at the outer Sydney suburb of Liverpool, for, as the motors had to work light from Acdep to Goulburn to work the tour, the opportunity was taken to convey Sydney-end patrons over this section.

Departure ex Goulburn was 20 minutes down, caused partly through an Up freight blocking the road out, and the fact that the

by Onlooker.

PTC requested the special take on about a tonne of parcels for Crookwell. These were sitting on the platform occupied by the freighter!

Although CPH motors ceased working the Crookwell line in 1944 (in the days when they were petrol-powered), it is believed the club's outing was the first over the line with two coupled.

In fact, the units, CPH 1 and CPH 19 handled the rising 1 in 40 grades admirably, even starting under full load away from photographic stops. However CPH 19 alarmed some passengers when it began 'ploughing the ballast' with its cowcatcher. At a couple of points its tail shaft even made contact with a frame crossbar. This seemed to be caused by its rather sagged suspension, and was more evident on the rougher patches of the little used line.

In the true spirit of enthusiast-hired outings, a number of photo-runs were staged, the first at the North Goulburn Hume Highway over-bridge which allowed patrons to record the train with the Fitzroy main-line viaduct in the background. A few minutes later the units were being photographed at 'old faithful', the Kenmore viaduct, a large steel bridge which crosses the Wollondilly River. Another stop was made in picturesque country about 2 km short of The Forest — and on the 1 in 40 grade.

Perfect reflection pictures were possible at an extended stop on bridges near Woodhouslee while on the return, the shortness of the train made delightful side-on shots in grazing country between McAlister and Roslyn. Even the property owner joined the photo lines for his pictures!

An unusual twist to the outing was the special screening of 120 colour slides by Goulburn photographer and enthusiast, Leon Oberg, in a Crookwell Uniting Church hall during lunch. These pictures were a small selection of interesting steam and diesel subjects taken in three states and included glimpses inside those difficult to get into places such as Australia's steel works.

If there were some non-photographic or rail-motor people on the tour, maybe these took in the wild-life passed for the sightings of at least two kangaroos, a fox, scores of rabbits and hares made the trip addedly interesting. Of course interest was maintained for most of the journey with wandering sheep and cattle continuously blocking the train's progress.

As with such trips, the end comes far too fast and arrival back at Goulburn North Box was on time, but as there was so much heavy freight activity about at that time, the motors were forced to sit at the Box's accept for almost 15 minutes.

But, the day was not yet over for the CPH's needed fuel to take the Sydney passengers and all went with the motors where an impromptu inspection of the locomotives including RTM exhibit, 3203 (in Goulburn for motion repairs) was enjoyed.

All in all, the organisers feel very satisfied with the day.

CORRECTION

In the last issue of the Australian MODEL RAILROAD Magazine a typographical error listed the incorrect address for the Australian LGB agents. The address should have been SUITE 103, 1st Floor, MacDonell House, 321 Pitt St, Sydney. The management of AMRM apologise for any inconvenience caused.

NSW WAGON COUNTDOWN — 2

In 1955, the NSWGR had 249 'MRC' type bogie refrigerator cars available for service. By 1977, only 43 vehicles of this type remained on the NSWPTC register.

Paul Rogers



Passengers leave the CPH's at Crookwell station soon after arrival here on July 1 last. Lunch was held at a nearby church hall where a colour slide show entertained patrons between munches. Photo: Leon Oberg.

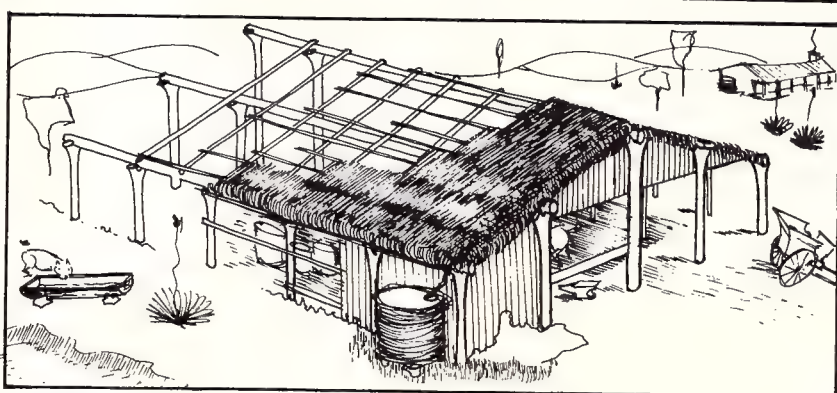
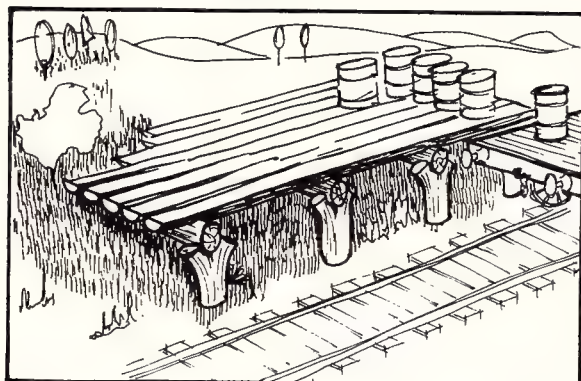
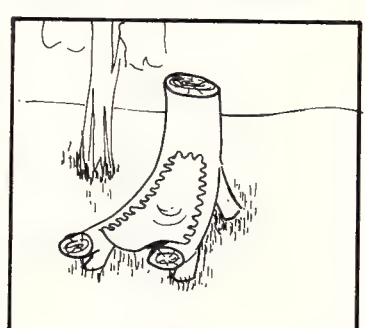
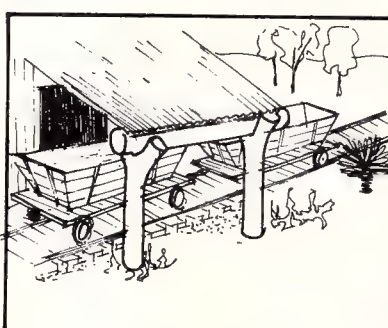
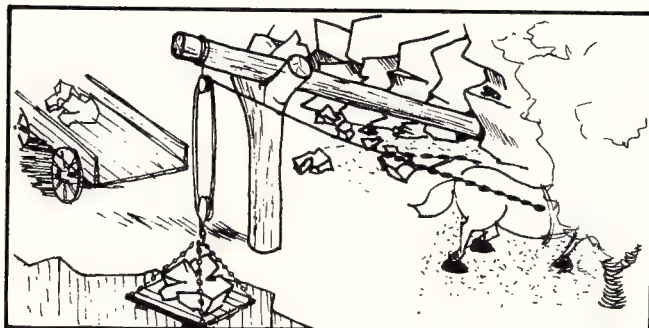
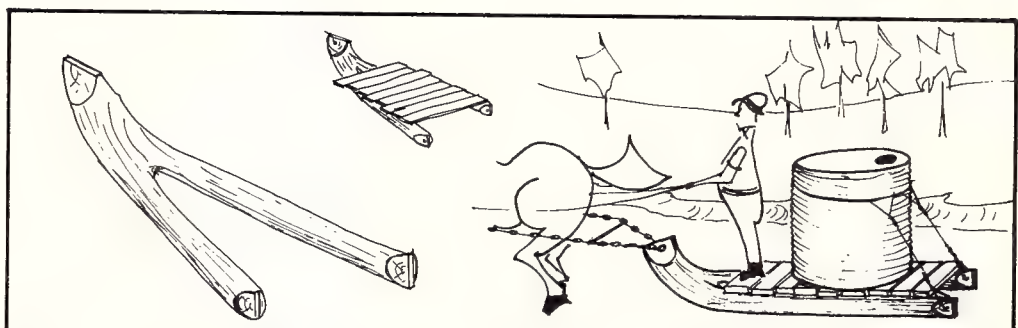
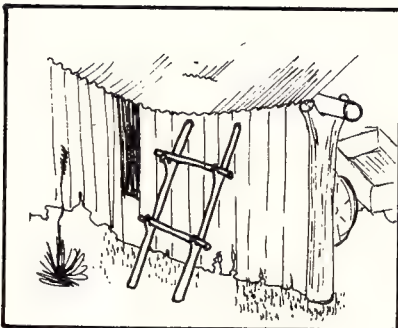
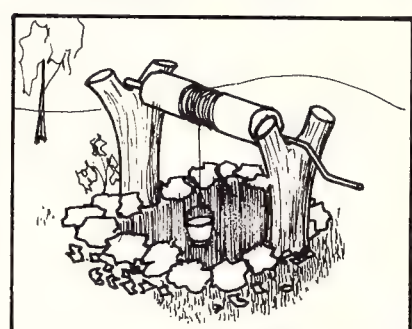
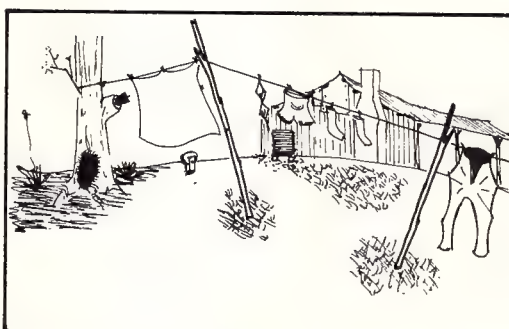
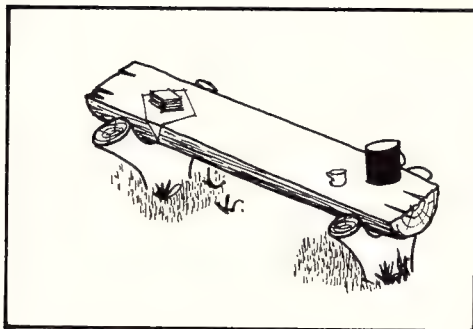
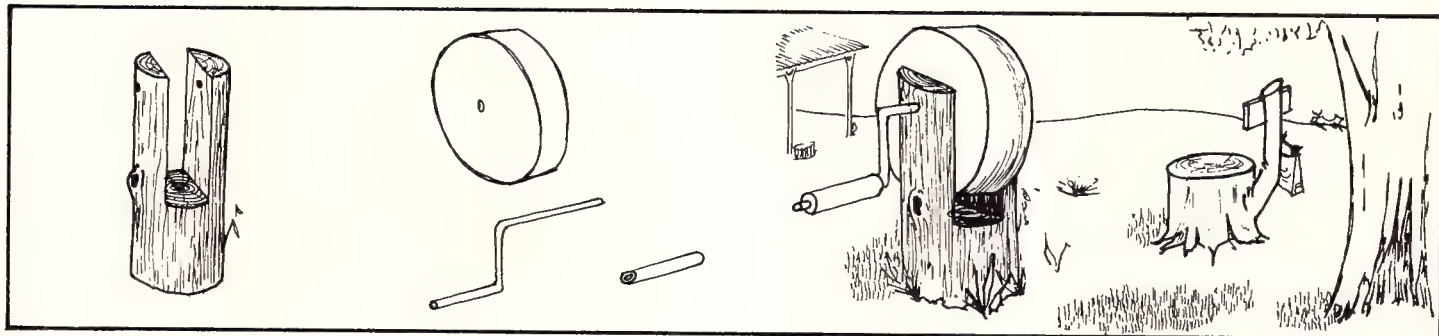


CPH 19 and CPH 1 are caught reflected in a flooded reedy creek in this trailing shot near Woodhouslee. Readers may wish to compare the headlight of No 19 against No 1 motor. The latter is of original steam locomotive design. Photo: Leon Oberg.

TAKE A TWIG OR TWO

plus a few other bits and pieces.

inspired by Jolliffe's cartoons but seen in life, these 10 minute doodles may add flavour to a layout set in pre-war years as much of Australia was build on the "Forked Stick". Drawn by David Wearne.



Are you in the dilemma I found myself recently. I had a Workshop 5 41 class loco body kit (no longer available) and on inspection I was dismayed to find that I had purchased the wrong loco to complete the conversion.

Unfortunately Life-Like, AHM, Mehanoteknika or whoever boxed the loco you may buy market similar locos with either a single power bogie or eight wheel drive from a centrally mounted motor.

After some careful measurement, and summoning some courage, we decided to "have a bash" at an eight wheel drive conversion.

Whilst this story is applicable directly to the eight wheel drive Alco C-415 or the Alco RS-2, I believe the chassis of Alco 1000 and Alco RS-11 are virtually identical in the 8 wheel drive model.

The bonus with the C-415 is a spare body which is getting close to a Walkers shunter and the RS-2 body requires only a new cab and about one extra foot each side of it for a 40 class Alco. Before you lightly dismiss the latter thought, look closely at this and the running gear from a Tyco Alco 630.

The techniques used in this project are not new but perhaps unorthodox for a power frame. Any N.S.W.R. modeller who has built a B.C.H. from any plastic quad hopper has the necessary skill.

Begin by removing the body and making a sketch of the relationship of bogie pick-up wires to top and bottom motor brushes. Desolder these wires (or cut) at the motor end and then completely dissemble the chassis.

The aim is to shorten the bogie centres and this has two parts:

- (a) shorten the drive shafts,
- (b) shorten the frame.

Obviously the two reductions should be very nearly equal.

It is suggested that the frame modification be attempted first so that the drive can then be adjusted to suit.

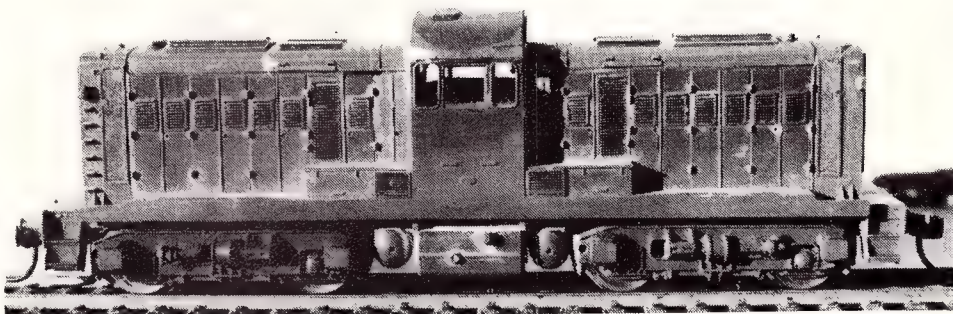
To standardise terminology it is proposed that the "back" of the motor is that end with the brushes fitted. Likewise the "back" of motor points to the "back" of the frame.

All handrails can be removed and the "front" and "back" platforms with steps etc. are cut from the frame leaving about 3 mm (1/8") of material beyond the bogie cut-outs. It is advisable to develop your skill at a square cut on these two ends.

It is relatively simple if a small machine

DOUBLE DRIVE FOR A 41

Max Chaseling describes a method of motorising the Workshop 5 Models NSW '41' class with an eight wheel drive mechanism.



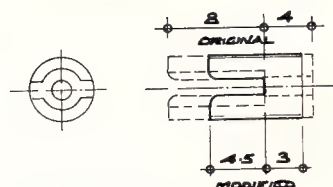
square is held firm against the frame side and the cut is made with a razor saw using the square blade as a guide. Do not guess, but mark your cut clearly with a scribe before you start. When finished, your frame will be about 5 3/4" long.

The standard bogie centres of 105 mm will be reduced to 88 mm. This is about the practical limit and necessitates only minimal modification to the Workshop 5 air tanks for bogie clearance. It also ensures reasonable space for the fitting of coupler pockets to the body as required.

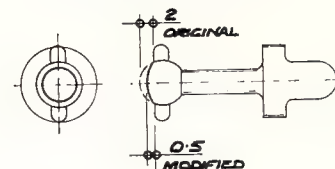
It is shown on the frame cutting diagram that 9 mm strip is removed 1.5 mm inside the front bogie cut-out and similarly an 8 mm strip is removed 2.5 mm inside the rear bogie cut-out.

The technique for removal is as for the end trimming but if the square is held on the cut line and covering the part to be saved, an irreparable condition will not be reached. The cut face will have to be filed smooth, so from experience with your trimming, you will know how close to the line you can cut to have sufficient material to clean up square.

If you are unsure of your ability to file square and flat, grip the flat file in the Vyce

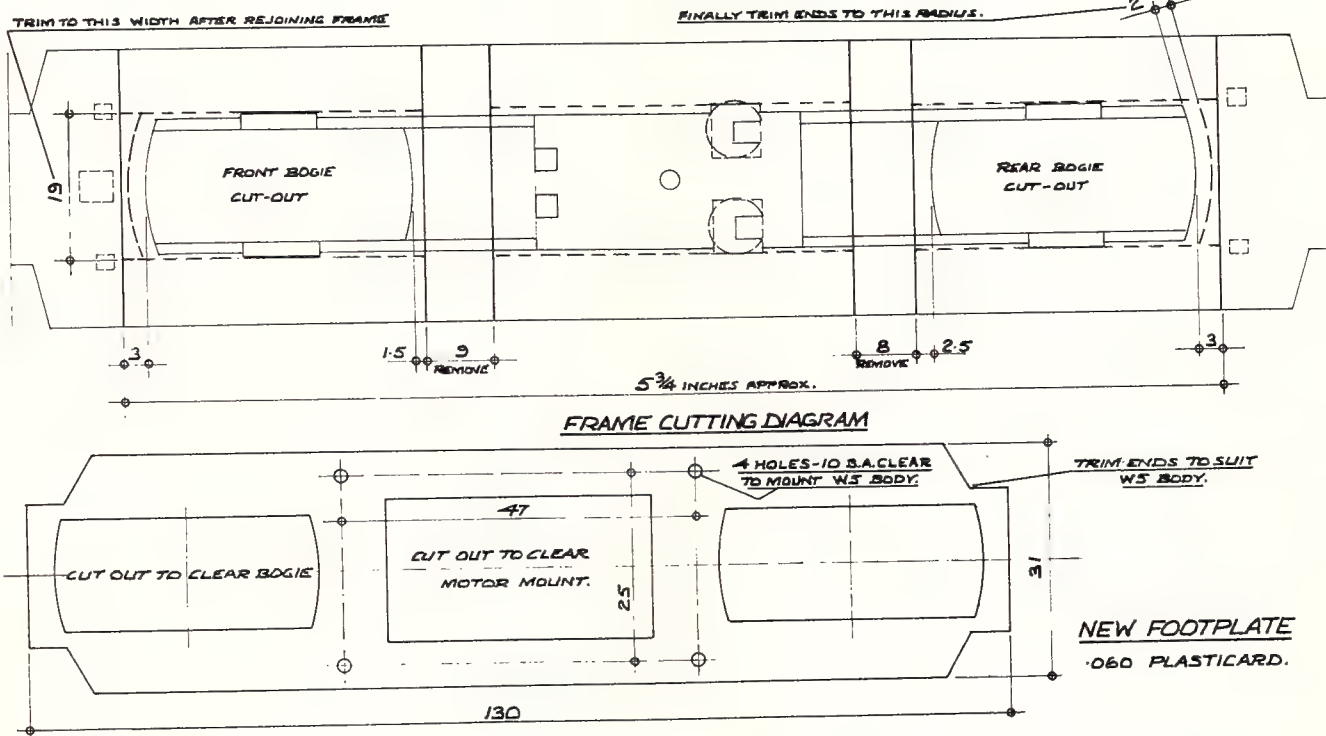


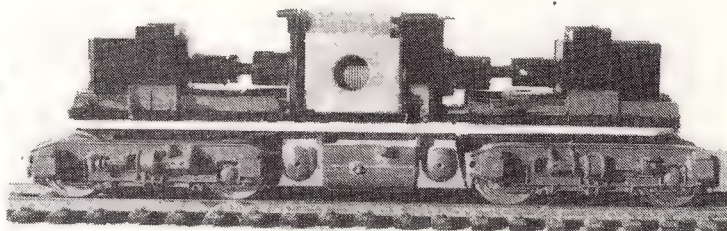
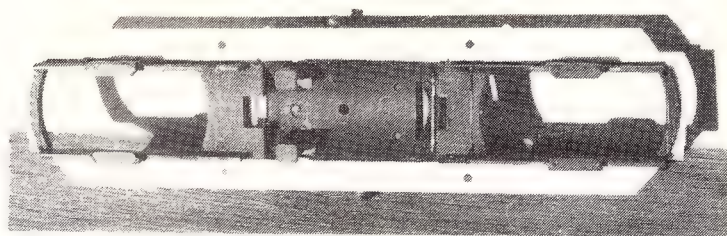
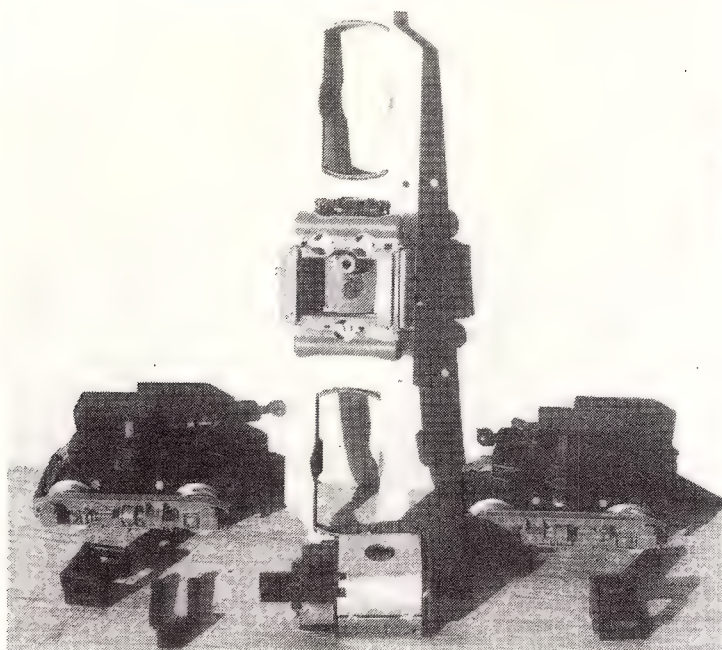
1. MOTOR COUPLING



2. CARDAN SHAFT

3. BOGIE COUPLING
NO MODIFICATION.





and carefully rub the part on the file. Keep checking squareness with the square and finish off with fine emery paper on a flat face.

When completed you will have three useful pieces to be joined. With a flat surface to work from (a sheet of glass is good) select some packing pieces to ensure the parts are parallel to the surface and have their obstructions clear. I have some 1 inch square bright steel bar. Cut to lengths for 200, 100, 50 and 25 scale ton loco test weights. They are more often used as parallel supports for just this type of operation.

I use chloroform as a solvent on this type of butchery. MEK will do but it is a little slow in action. Hold the mating faces together on their parallel packings and drop a few drops of chloroform onto the crack using a pair of tweezers in the closed condition. Do not breathe the chloroform vapour for it is believed to have a long term biological effect. A paint brush will perform this deed but it is messy. And besides, you can see how much you use if you lift it out between tweezer blades.

Maintain slight pressure between the mating faces for about 30 seconds and the joint is complete. Complete the second joint similarly then place the unit restrained in a flat plane for 24 hours to harden.

I then fill any cracks not bonded with Testor's liquid polystyrene cement and leave again overnight.

The frame is then trimmed both sides over the length with a razor saw to the width of the support flanges outside the bogie cut-outs. This will reduce the frame width to 19 mm.

The frame ends are trimmed until the ends are parallel with the bogie cut-out curved ends, with a 2 mm wide strip of material remaining.

A piece of 60 thou. plasticard: 130 mm x 31 mm wide, is then cut to clear bogie cut-outs motor mounts etc with the ends trimmed to the diagram for this new footplate. Its purpose is to lower the overall height of the loco back to the scale dimension, and stiffen the modified frame.

Sit the modified frame on top of the new footplate and ensure that the motor, mounts and bogies can be correctly assembled and then glue the assembly together. Again I used chloroform on all touching faces (it dissolves residual paint) and filled cracks with Testors and chloroform. Ensure the assembly is held flat and square (with weights etc) during this process and leave for 24 hours.

I have been perhaps verbose with this explanation but it will eliminate any doubts. This is a simple technique and can be applied to almost any rebuilding in plastics.

The actual work time for the total process so far will be less than one hour and the drive modifications can be worked in parallel, so do not lose heart.

The second phase of this operation is straightforward in that 17 mm was removed from the bogie centres so 17 mm has to be removed from the drive line.

For convenience we will name the three parts as:

1. Motor coupling
2. Cardan shaft
3. Bogie coupling

The motor coupling is reduced in length as in the diagram. These are carefully levered off the motor. The cardan shafts have the spherical motor end reduced 1½ mm as in diagram. Leave the end smooth and slightly rounded and do not damage the drive pins.

The bogie coupling is not modified but it is removed to shorten its shaft. The shaft is shortened to 2½ mm as in sketch. The bogie will not have to be disassembled if the shaft end is held in a pin Vyce and this is then cut off with a razor saw. Remove the burrs on the end with a fine file.

When refitting the coupling make a large washer out of thin card and fit the coupling against the washer. The card is then torn off ensuring a positive clearance.

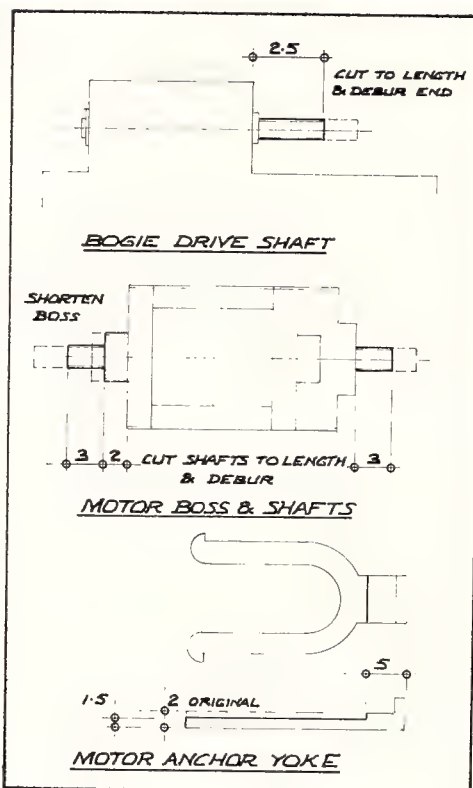
The front bearing boss on the motor protrudes 3 mm on the motor frame. Carefully reduce this to 2 mm with a sharp knife and it is not necessary to disassemble the motor. The motor shafts are then reduced to an extension of 3 mm as for the bogies. Refit both couplings (with card washers) before removing either washer. After removing both washers ensure motor turns freely without either coupling touching the bearing housings.

The motor anchor yoke is now reduced from 2 mm to 1.5 mm thickness from a point 5 mm down from the top. This is to ensure clearance with the front motor coupling. Do not forget to partially block-off its mating holes in the chassis.

From this point the frame is fitted to the Workshop 5 body and I will add a couple of points I discovered.

I fitted the new bogie sides direct to the projections on the bogie after carefully removing unwanted sides, but used super glue only on the centre projections (to permit subsequent bogie disassembly).

The centre of the fuel and air tank moulding was curved to fit the new chassis using medium emery paper wrapped around a suit-



able piece of pipe.

Some heavy removal of the inside body ends and sides was required to fit the body but care paid off.

The body is held on the chassis by 4 — 10 BA CSK. screws tapped up into the body battery boxes. Make sure you have access to the screw heads with the bogies fitted.

Trim the outside bogie ends carefully to clear couplers. I fitted Kadee MKD — 8 using a 1/16" plastic packer under the W5 body. Trim the original weight and glue it into the fuel tank with plenty of contact adhesive.

Total working time on the chassis mods — 2 hours and certainly no more than three — for a superb drive, and much less than the fifteen to prepare the story.

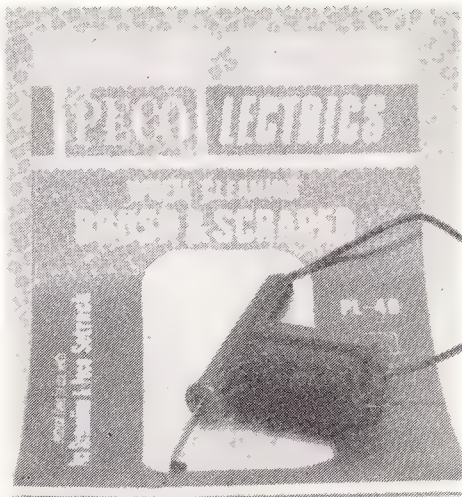
DIESEL MECHANISMS

While this article is a full description for a double ended drive for a Workshop 5 Models NSW 41 class diesel, the method can be adapted to fit any other diesel with similar sized Bo-Bo bogies.

Editor.

The advertising DEADLINE for the November/December 1978 issue is the 20th October, 1978. Please be early.

REVIEWS



Peco Wheel Cleaning Brush and Scraper. Our sample supplied by Sans Souci Sports and Hobbies, 504 Rocky Point Road, Sans Souci 2219. Price \$3.50.

The brush part of this set comprises a series of brass wire bristles set into a red plastic base approx 1" by 1/2". The scraper is a strip of metal about 1 1/4" long by 3/16" wide and is hooked at the end. It, too, is moulded in a red plastic handle. Both items have a length of wire (about 2') attached to them.

The method of operation is to connect the two leads provided to a 12V DC power outlet — one tool to each terminal. With the loco upside down, apply the scraper to a driving wheel on one side and the brush to a wheel on the other. With the power on, the wheels will revolve and enable the dirt deposit on the tyres to be removed by applying *gentle* pressure first with the scraper and then by changing over to the brush to finish off.

I found the tools to work quite well, although by holding one in each hand there's nothing left to hold and steady the loco with. I sat it in my lap. I would like to see each of these tools containing an alligator clip. It is a lot easier to take power directly from the track than it is to undo the wires from the power pack. The tools are comparable with similar brands currently on the market, although a little less costly.

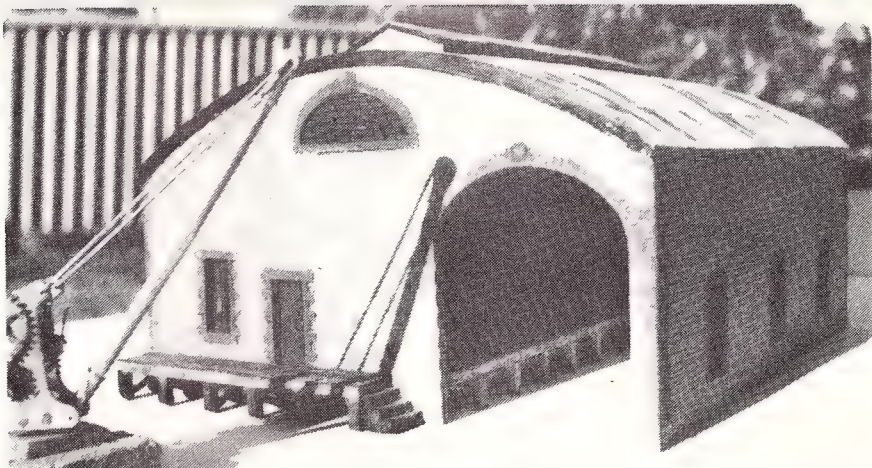
Allan Brown

4 wheel open wagon — Berliner Bahnen, TT gauge — Sample supplied by B. H. Winn Pty Ltd. Price: To be advised.

This wagon is a typical modern European long wheelbase open wagon with centre and end discharge doors and lettered for Deutsches Reichsbahn. Measuring 83mm over buffers, the wagon is very well detailed externally. It is painted with the usual brown body and black under-frame with appropriate lettering. The model is free running with self-centering couplings used by this manufacturer.

Passenger Carriage — Berliner Bahnen — TT gauge — Sample supplied by B. H. Winn Pty Ltd. Price: To be advised.

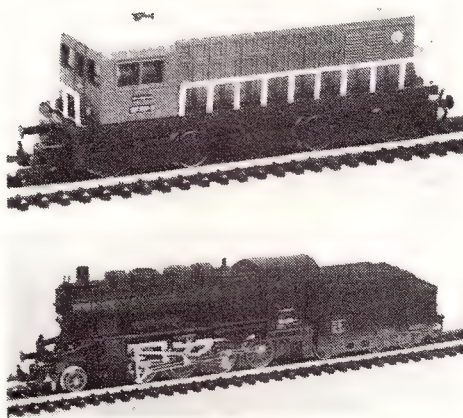
This scale 77" vehicle is the typical European express passenger carriage. The model represents a composite vehicle painted green with grey roof and lettered for Deutsches Reichsbahn. Nicely detailed



with interior compartments and underfloor fittings. To allow the carriage to negotiate sharp curves, the buffers, couplings, etc. are part of the bogie framework. The carriage looks the part and with the open wagon mentioned above, give some idea of the vehicles in this range.

Bo-Bo diesel, BR.107 — Berliner Bahnen, TT gauge — Sample supplied by B. H. Winn Pty Ltd. Price: To be advised.

The prototype of the model was developed as a medium power shunting locomotive of 750hp by the Prague Locomotive Factory CKD. The model has an unusual drive mechanism which drives on one axle on each bogie which is fixed. The other axle pivots to allow the locomotive to negotiate curves. The locomotive is of the hood type with cab at one end. It runs well with quite good low speed control and would make a good shunting locomotive.



2-8-0 steam locomotive — BR.56 — Berliner Bahnen, TT gauge — Sample supplied by B. H. Winn Pty Ltd. Price: To be advised.

The prototype of the model was developed as Series 56 of the Prussian State Railways for freight working, some 859 entering service. The model appears to be a faithful representation of the prototype and is painted black with red frame and lettered for Deutsches Reichsbahn. All four driving wheels sets are driven, two are fitted with traction tyres. The tender pivots off the locomotive frame and the tender wheels run in a separate brass frame.

The model is well detailed includes such items as brake shoes on the loco. It runs well with good low speed control and should haul a quite satisfactory load for its scale.

Graham Ahern

S.A.R. Stone Goods shed kit in HO scale. Marketed by McBee's Hobby Centre, PO Box 144 Coburg, 3058. Price: \$11.95 plus postage.

In the early days, and probably still today, builders in South Australia had a problem for there was a large deficiency of timber suitable for structural purposes and, so, the pioneers turned to the readily available bluestone rock for domestic and farm buildings. The SAR also used the stone for station and lineside structures including the curved roof style goods shed typical to many SAR areas. This kit is a representative of the stone, curved roof goods shed.

The kit comprises primarily epoxy castings, grey in colour, along with some metal and timber trimmings. The kit is complete except from some acetate sheet, paint and the interior dock. The shed is 61 ft long, 44 ft wide and 25 ft high, has a through road, exterior loading dock, office annex and loading/unloading doors. The epoxy components (walls, doors, roof) are free of visible flash and virtually clear of air pockets; those present can be filled with epoxy on the end of a tooth pick. Most are flat but those bent can be straightened by heating in warm water. The roof is supplied as a straight section and has to be heated and bent to the correct curved shape.

The detail on each component is excellent, the placement of the stone being random. The brickwork around the windows and doors is a feature in that it highlights the features it supports, i.e. the windows and doors. The roofing captures galvanised iron at its best, each sheet in its place. Basic assembly is by gluing the components together, this being made possible by mitred joints. As long as the assembly instructions are followed a fine model will be the result. The instruction sheets (4 pages) are highly detailed and painting instructions are included.

Care must be taken but the assembly of the kit is not too difficult. It is a craftsman style kit and equal to those now available in the United States. The style is South Australian but would not be out of place if accompanied with other stone buildings. An excellent Australian made product.

Bob Gallagher.

Cav'ndish Miniature Posters, in OO/HO scale. Our sample supplied by Sans Souci Sports and Hobbies, 504 Rocky Point Road, Sans Souci. 2219. Price: 75c.

This is the third sheet in this popular English range. Unlike the two earlier sets which are printed on paper this one is on slightly heavier card to allow for those signs which are intended to be self-standing. The size of the sheet is 223 mm by 150 mm and all printing is in full colour. Naturally, each sign has to be cut out.

The set is designated "Trade Signs — old style" and features factory and storefront signs, awnings, estate agent signs, a clock that stands proud of the building, Railway Hotel, etc.

The printing is clean and sharp, and there is no overlap of the colours. Although of British origin the majority of the signs are adaptable for use on layouts of most English speaking countries. They represent value for money.

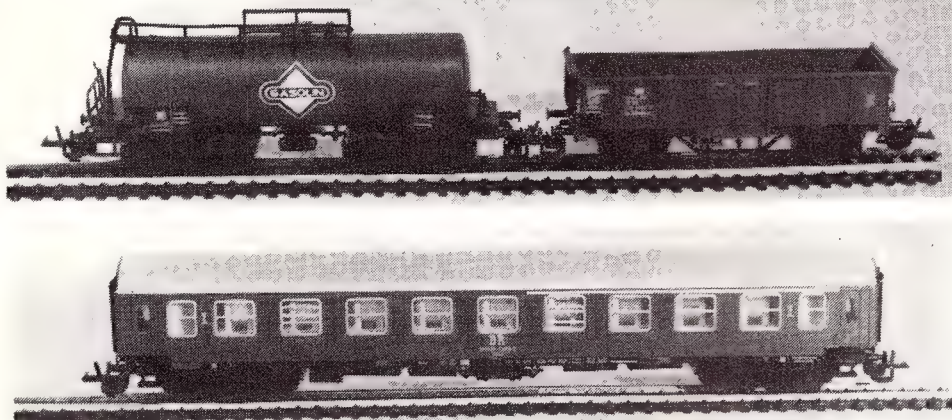
Allan Brown.

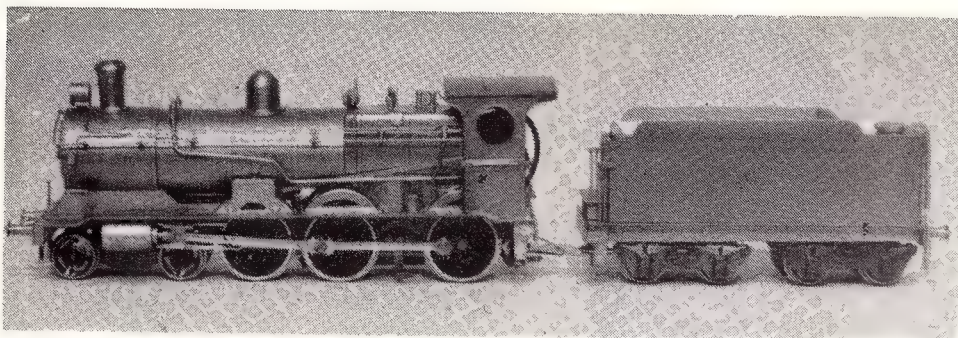
Cork Ballast in HO/OO & N Scales by Gifford Products, 118 St Kilda Road, St Kilda Vic 3182, who supplied the samples. Price: 30c per packet.

Cork has been used for ballast for many years and has its advantages and disadvantages. It can be stuck down by placing the ballast in place, spraying with a water and detergent mix and gluing with a water/aquadhere mix (8 to 1). It should be painted when completely dry; depending upon application and colouring it can look very realistic.

The Gifford Products ballast is supplied in two grades, HO/OO and N scales. In both instances the ballast is granulated cork and is supplied in a plastic bag. The HO/OO grade is rather large, each piece averaging at least 6 HO scale inches wide, but the N scale ballast is, in HO scale, between 2" and 1" pebbles — being very fine in size. Very little dust is evident in the package.

Bob Gallagher





NSWGR (P) C32 class 4-6-0 steam locomotive and tender in HO scale. Imported by Berg's Hobbies, 223 Church St., Parramatta, 2150. Price: \$235.00

The 'P' class locomotive was introduced to the NSWGR in 1892 as the main passenger express locomotive and over the years became the mainstay of passenger and goods traffic on far remote branches and the main lines. Passenger service included expresses, mails and interurban trains, and a C32 class had the honour of hauling the last regular steam hauled passenger train in NSW. In all 191 units (3201-3391) were introduced, being built by different manufacturers including Beyer-Peacock, Baldwin (US), Clyde Engineering and Eveleigh Workshops. Despite the different builders they all retained a similar appearance (Beyer-Peacock style), one that applied to many classes of locomotives on the NSWGR roster including C30, C30T, C32, D50, D52 and D55 class. Over the years modifications varied the class and changed its appearance but it still retained the original style. Some modifications included superheating (which lengthened the firebox) and larger tenders. Some units were introduced with 6 wheeled tenders and others with bogie tenders. Most of the tenders were modified to carry more coal and these modifications were still in existence when steam was withdrawn in NSW.

The model, in ready to run form, is imported from Japan and is the second series of the C32 class model, the first being imported in the late 1960s. The unit is handcrafted and represents the C32 at the demise of steam, with superheating and large capacity tender. The unit reviewed is well built with only a few items out of square, and the overall dimensions are very close to scale. The power source is a combination motor/gearbox assembly driving the centre driving axle and the smoothness of the drive cannot be challenged.

Detail, the aspect that gives a brass locomotive character, is mostly good, especially the air compressor, but some major detail items do not represent those used on the C32 class. The stack is the wrong shape, the dome and headlight too small, the buffers are the wrong shape and too long, the handrail stanchions stand off the boiler 10 scale inches instead of 3 to 5 scale inches and the cylinders are not on an incline as per the prototype. These latter deficiencies tend to take the gleam of what is a fine locomotive.

Obviously Berg's Hobbies were not pleased with the final product for they have arranged for new buffers, stack and dome and these will be fitted to the locomotives before they are sold. Those purchasing the locomotive before the parts became available can either pick up the parts or have them fitted to their model.

Unfortunately AMRM was not able to gain access to a revamped model so the photograph represents the model before modification.

Bob Gallagher.

NSWGR 6 Car "CUB" Set by MRC Models in HO Scale. Price: \$41.50.

The "CUB" cars, as the "L" series cars were affectionally known, were introduced to the NSWGR in 1930; the cars were rebuilt from obsolete side-loading (dog box) cars. In all 84 cars were converted from BI, FO, HFE, HFO, HFC, HC, HS, AJ, CCX and CFE cars. All cars had Mansard roofs, 2SB bogies and exterior matchboard siding below the belt rail (window ledge), this siding was covered with masonite in later years. A main feature of the cars was the window arrangement of a small square

crown light above the main window. The cars were made into four different codes with variations in each code.

Basically these were set cars (cars that made up 6 car CUB sets) and independent cars. The outer end of the guard's car and the independent cars did not have end vestibule connections.

The different codes were BL, FL, RFL and HFL. The BL is a 42'6" or 46'0" first class car, the longer car having an extra seat near the entrance. The FL is a 2nd class car 42'4" in length. The RFL is a 46'0" FL car with a short corridor section at one end containing a buffet compartment. The HFL is an FL car with a guard's compartment at one end. The independent cars are restricted to BL, FL and HFL codes. The set cars are marshalled into HFL-BL-BL-RFL-FL-HFL sets and were numbered 80 to 86; the seven sets were close-coupled, ie having short buffers between cars on the vestibule connection end.

Originally some sets had a special livery and duty. Sets 80 and 81 were painted red and cream and were used on the Newcastle to Sydney trip daily behind a maroon C32 class and later a C36 class. The sets continued in service until just after the war when the C38 class and air conditioned sets took over. Set 82 was painted green and cream and was used on the fast passenger service from Sydney to Nowra behind a green C32; this train became known as the South Coast Daylight. Set 86 was painted blue and cream and shared the Caves Express (Sydney-Mount Victoria) daily working with "VUB" set 85; these sets were hauled by a C35 class locomotive. The remaining sets (83, 84 and 85) were painted russet and red (the standard colour of the day) and worked the outer suburban services to Campbelltown, Penrith and Richmond.

In later years all sets were painted red and lined with a buff belt rail and were used for short haul and special duties. In early October each year a "CUB" set was used for the Tulip Time Special, a train that ran between Sydney and Bowral and was stored at Moss Vale.

Most, if not all, units went through a further modification having the matchboarding covered with a flat board and some had the crown lights covered. In February 1976 sets 81 to 85 were still in service as were 2 independent BL cars, 6 independent FL cars and 6 independent HFL cars. There was also an independent CL car which had been converted from an FL; the new coding has 20 1st class and 28 2nd class seats.

The MRC models are sold as a set of 6 cars representing "CUB" set 85.

The models were researched in 1974, when the set consisted of HFL 343 — BL 337 — BL 356 — RFL 418 — FL 355 — HFL 416. As supplied each kit for an individual car consists of 2 sides, a floor, 2 outer detailed ends, 2 inner ends and a timber roof. The roof is pre-formed but does not accurately conform to the roof contour of the ends. The sides, ends and floor are cast in ????????, clear in colour and an average of 1/64" flash is evident. Windows are cast in place. Care must be taken not to implant a fingerprint or two on the plastic in humid weather. The detail on the sides and ends is a little coarse, most items being oversized. The square cornered crown lights featured in this class of car are represented, although the actual window area is smaller than it should be. The only detail on the floor is coupler (Kadee) and bogie centre marks, in some cases these are inaccurate and should be checked. The cut-out, in the ends, for the Kadee couplers is too deep and will need to be filled if the cars are to be assembled to correct height.

Overall the dimensional detail is average with some cars being too long (6"), too high (6") and too narrow (6"); the discrepancies do not affect the overall appearance. However, the bogie centres, marked in the floor, are thrown out by the inaccuracy in length.

Assembly of the body kits is straightforward and within the scope of any ham-fisted modeller, however if additional detail is required plans are necessary and these are available from the PTC Archives. The assembly sheet is sufficient to assemble the basic kit but has no details for super-detailing.

As indicated these are basic body kits and the bogies required are PMH 2AA, these should be packed up by 1.5 mm. Further detail that can be added includes queen posts and truss rods, steps, grab irons, battery boxes, fuse panels, generators, end steps (on HFL), ventilators, buffers and diaphragms.

Painting is a difficult task for the windows need accurate masking and some faults in the master patterns will show up under a light spray.

This is a set of basic body (only) kits. If the instructions are followed reasonable set of tourist passenger cars would be the result, further detail could be added by the more discerning modeller.

Bob Gallagher

Boltheads in HO Scale by Kadee. Supplied to the trade by Ferara Distributors, 5/8 Olive Grove, Dandenong Vic. 3175.

Many structures, especially timber trestles, were held together with large diameter steel bolts; the head of the bolt was a feature on an otherwise plain structure. The Kadee boltheads, which are really nut (washer and bolt detail on a metal sprue) are cast in a soft metal. There are 42 bolts supplied attached to a sprue from which they are easily removed. The .6 shaft allows mounting by drilling holes in the appropriate position on the timber (of the model). The bolt (nut) head is .6 mm which scales out to 2 inches; the washer is 1.4 mm.

Flash is evident on a few of the boltheads.

Bob Gallagher.

RELCO model railway HF generator, manufactured by Rosefair Electronics Ltd. Sample supplied by Jack Stanbridge's Hobby Shop, 19 Guildford Rd, Mt Lawley, WA. Price: \$21.95 plus postage.

"Eliminates the frustration of stopping trains"... "Makes your train go" adorn the Relco packaging. The inquisitive mind quickly checks the back of the pack for more details and reads that the manufacturer suggests that the use of the Relco HF generator will combat dirt, oil, carbon deposits and bad connections on the track thus eliminating erratic locomotive movements.

In a few words "It works". It was connected, as per instructions, with a DC controller onto a very dirty track and used to power some poor running steam locomotives and the performance was amazing, for the locomotives ran very smoothly, despite the dirty track.

How does it work? The manufacturers indicate that, when correctly connected as per the diagram supplied, the unit converts the controller power to a High Frequency at a power level of 1/8 (0.125) watt, which is superimposed onto the normal DC track. When the locomotive runs normally (i.e. without poor connection) the HF is switched off automatically, but when a poor connection occurs the HF (switched on instantly) 'ionises' the air gap allowing the DC current to flow to the locomotive.

The unit has some drawbacks in that it needs to be installed close to track connections and each controller will need a separate HF generator and, most importantly, it does greatly affect audio/visual equipment (TV, radio) and as such needs suppression; however these drawbacks cannot in any way suppress the need for this unit on any layout.

It will run with both rheostat and electronic controllers, although a separate power source is necessary for using the latter controller, but the unit will not work with HF lighting. To date the unit has only been tested by AMRM using a rheostat controller.

Bob Gallagher.

Layout design sheets. Produced and supplied by Emerald gazette 4 View St., Upwey, 3158. Price: 10c a sheet.

These sheets have been especially designed for modellers of all scales and gauges. A foolscap size sheet, they are set out in squares of 5cm which are in turn divided into 1 cm squares. An equivalent scale bar for N, HO, O & 1 scales and a radius scale in inches for designing in 1/10 scale is included at the bottom of the sheet.

Model Railroad author John Armstrong's method of designing layouts knowing what track and curve elements will fit into a certain size square is ideally suited to these sheets. By filing completed sheets into a binder a comprehensive record of your design developments can be kept. Using the given scales a layout 2 metres x 3 metres could be designed. Larger layouts would require a smaller scale to be used or multiple sheets.

The sheets are an additional help to the layout designer although at 10c a sheet designing a layout could add up to a few dollars, especially for the doodler. A big improvement would be to produce the sheets in pads similar to the graph paper pads which are readily available.

Ian Thorpe.

Scale Timber Stripwood by Camino: Samples imported from the US through Sans Souci Sports and Hobbies Store. Price \$1.20 per pack. Also available through McBee's Hobby Centre in Melbourne.

What can I say? As a dedicated scratchbuilder I am lost for words sufficient to praise this item. I have used stripwood extensively in scratchbuilding rollingstock and structures for many years and have been plagued by difficulties in supply and limits to



sizes available. Seeing a new name on the scene I recently caused to have imported samples of this item.

The stripwood comes in 12" lengths with each size individually packaged. The number of lengths per pack is varied to give a uniform price per pack. A small size such as 4" x 2" has 14 pieces per pack and this falls to 10 for a larger size such as 10" x 10".

The timber is good quality basswood and the section is uniform in shape and edges are sharp and fine even in the smaller sizes.

The range available is extensive and runs from 2" x 1" up to 24" x 24" with about 100 sizes in between including all the most frequently used sizes. Ordering is by the prototype size required i.e. 6" x 4" which greatly simplifies ordering and use as you need only lift full size measurements from plans and diagrams without reducing them by 1/87 for HO. The measurements are meant for HO but conversion to other scales is quite simple.

The method of individual packaging is excellent and will facilitate storage and locating the size wanted. (No more rummaging through a pile of stripwood with a scale rule looking for a particular size, an exercise which is both frustrating and time wasting.)

All in all then a most useful and welcome item for scratchbuilders. Its quality, range, low cost and ease of storage make it ideal. Hopefully it will become more readily available as this has been one of the problems with stripwood in the past. It may even encourage more modellers to take up scratchbuilding.

I probably sound over-enthusiastic about this product and with all the comments about the accuracy of reviews which have appeared in Mailbag recently I can only say that I use and fully recommend Camino scale timber. I wouldn't do this review if I didn't.

Ron Cunningham

AMRM NEWS

Compiled by Bob Gallagher and AMRM Staff.

Regrettably this issue is rather brief on the regular articles, but this has been bought about by unavoidable circumstances. Readers are aware that all production work for AMRM is accomplished in our spare time, and recently we have had little spare time to devote to AMRM. Family and work commitments have taken toll of time and, while the actual production of this issue did not greatly suffer, our correspondence and research has, so please be patient with us for a few more weeks.

Jealousy

It is often amusing (but also disheartening) to hear comments and read letters that bring to the fore what can only be classified as petty jealousy. Unfortunately the model railway hobby in Australia has fragmented into divisions, one being modellers who are content (monetary and detail wise) with commercial models Hornby, Lima, Piko, etc, and the other who either purchases brass models or takes the time to build his own models, the latter being the prime part of the hobby to the individual. The first section, for the purpose of this exercise, will be tagged the 'commercial' and the latter the 'nitpickers' for these are some of the names individuals from each opposing group put upon the individuals from the other group.

It is a senseless and stupid practice, for each individual within the hobby has his own standard which is usually set by economic and ability circumstances. Light-hearted stirs are good fun, but to completely disown or discredit another individual because he does not meet your own standard is very childish.

There is little doubt that some modellers either do not have the initial knowledge or lack the initiative to try their hand at some aspect of modelling. Instead, they shrug off their problem by attempting to discredit someone who has acquired a higher standard. This matter has been made clear to me at exhibitions when attending/operating layouts such as menangle. As with other exhibition layouts the Model Workshops group try to explain to any enquiring modeller the method by which we obtained the final model of which the enquirer is showing interest. After having been given a detailed explanation, more often than not the modeller replies, "That's alright for your lot, you're all experts." This statement shows continually the ignorance of the enquiring modeller for, as with many other exhibition layouts, the Menangle layout was built by modellers wishing to learn scenic and modelling techniques and if the individuals wish to look close



J. KELLY — SIGNWRITER AND POSTER HANGER

Have you ever wondered how road side hoardings are changed and who changes them?

Well one day Webber Budd happened to find J. Kelly changing an 'Ansett' sign with his assistant about to pass up another section of the new sign.

This realistic scene is an 'HO' scale model by Peter Kelly and photographed by W. Budd.

The four sections that make up this scene are:

(1) The hoarding which is a 60 mm x 50 mm piece of balsa on which is glued two pieces of 20 S.W.G. wire for supports. Over this is glued the sign which came off an Ansett folder. The strip of the new sign is also from the folder.

(2) J. Kelly and his assistant are 'Airfix'

R.A.F. ground crew.

(3) The ladders making up the 40 mm high trestle and the 60 mm x 40 mm plank came out of the spare parts bin.

(4) The 'Fun-HO' van has telegraph pole cross-arms as ladder racks supporting a 'Ratio' signal kit ladder.

'J. Kelly Signs' is a biro written sign on white paper, and the other signs are transfers from a model car kit.

So the sign can be used in more than one place, the reverse side of it has a 'Qantas' sign being changed and by reversing the sign a different design is presented to the public.

Peter Kelly
Photo by W. Budd

they will see that many models that run on the so called nitpickers layouts are the same models that run on other layouts.

The model railway hobby is one of continual learning and the moment we lose sight of this factor we commence the progressive decline out of the hobby.

Next time you visit a layout, an exhibition, club meeting or whatever, go with an aim to learn, and after the episode take account of what has been learnt. If you come up with a blank answer your approach to the hobby needs reorganising or maybe at last you are the first individual to know everything about everything. (He is like the person who has never made a mistake i.e. he has made nothing, and so the know all probably knows nothing and wants to know nothing).

Happy Birthday.

It is pleasing to see clubs taking pride in their continual existence and celebrating major birthdays. Granted, not many clubs have lasted long enough to really celebrate, and many clubs ignore the social side of life, but recently the Prospect Model Railway Club celebrated its 10th birthday with a dinner at the Blacktown R.S.L. The dinner was shared with representatives of neighbouring clubs, AMRM Editor and Managing Editor as well as the founders of the club. The complete theme of the evening was fellowship and quite successful at that. Many readers may not be aware of the existence of the Prospect Model Railway Club and in a way it is like many other clubs suffering the same problems, but Prospect seems to overcome all obstacles fronting it. One specific instance indicated their refusal to bow to unbeatable odds when they were taking their layout to the Sydney Model Railway Exhibition a few years ago. Upon arrival at the Sydney Town Hall, or just before, they became aware of a 'small' problem, that being that most (if not all) of the scenery had detached itself from the layout and gotten lost. Most would have turned tail and headed home, but not the mob from out west. Before most other layouts were running the Prospect crew had set up their layout and commenced re-scientificing the completely barren framework.

The Prospect M.R.C. has now been in existence in some form or other for ten years and, to this day, should be proud of its record. It has become fiercely identified with U.S. prototype, when the common

trend was to go Australian, and has continued to encourage model railways in the Far Western suburbs of Sydney. Congratulations Prospect and lets hope a few more clubs will take your lead and become an identity with the hobby, instead of hiding from public view.

Improvement.

For some reason or other an inbuilt instinct with the human race forces us to try and become better at everything we do and, thankfully, this same instinct is conveyed on to the model railway hobby. Most readers are aware that we at AMRM are continually trying to improve this magazine. We know we can never really catch up or realistically compete with the large overseas magazines, but we can try.

Likewise the local (and overseas) manufacturers and importers continue to improve their product, to the benefit of the railway modellers. Take for instance the brass C38, when it was first introduced in 1963 it was accepted without question, even if many did make alterations, and when it was re-run in 1977 the old song 'Everything is better the second time around' was made true, for many, many improvements had been made; in fact it was a completely new model. Now, with Berg's Hobbies re-running some models we must look with hope that many of the errors made in the first run a few years ago will be corrected. So far the record is a little shaky for the C32 arrived with a few rather noticable flaws. To the credit of Berg's Hobbies they have been able to arrange for replacement components and anyone purchasing the model now will get a unit with the new parts attached. For those who have already purchased the C32 with its unusual dome, stack, etc, they should beat a line out to Parramatta and get the replacement parts for their C32.

FSM, the recent newcomer to the Australian Prototype manufacturing scene, appear to be continually striving to improve their models. They recently withdrew their first kit, the N.S.W.G.R. Z25 and will soon re-release it with many modifications, actually making it a new unit, for many parts are being completely changed. A recent press release indicated that FSM will be using some lost wax castings to add to their kits, and now we learn that they are to use a special alloy to cast delicate parts, i.e. rods, valve gear, etc. All looks well for the Australian modeller, so long as we take advantage of it.

MAILBAG

Sir,

I am writing this letter in the hope that somebody can justify the high cost of an imported brass Australian prototype locomotive. I should also point out that I am writing this letter not as a member of the staff of this magazine but as an active local prototype modeller who is very disgruntled about the fact that the cost of the models of locomotives I would like has risen very rapidly out of my reach.

The high cost of purchasing the available "almost correct" brass imports and the meagre supply of locally produced locomotives is having, in my opinion, a dampening effect on the growth of the hobby in regard to the local prototype. High prices are turning prospective local modellers to the readily available American and European prototypes.

My complaints about Australian brass imports are firstly, glaring faults both in outline and performance and secondly, price.

Over the years we have accepted the minor but glaring faults in the outline of imported models. Today it should be different; there have been numerous imports from the major Australian importers. Some have been good, some mediocre and some poor. I don't think we should accept excuses like "well, it's almost right" and "it's from a different manufacturer" anymore.

Why is it that the majority of brass imports have some glaring fault? Is it because of faulty plans? Has the importer no control over the finished product?

When a person pays in excess of \$200 for a brass import it should at least look like the real thing. Funnels and domes should be correct, cabs should be correct, boilers should be the correct diameter, valve gear shouldn't bind and, most importantly, it should run smoothly. Is it because the latest C38 available has a locally produced pilot model that makes this such a fine model?

I don't consider myself a rivet-counter but I like my models to look right. No one wants to pay in excess of \$200 then find that parts have fallen off or the model will only run in reverse. Not all buyers of brass have the skills or can afford to pay someone to make the necessary alterations to a very expensive model to make it look right and operate efficiently.

My next big beef — price!

Why is it that the latest C32 import from Mr Berg's establishment should cost \$235 when, in 1970, a similar but in my opinion better model cost \$60. An increase of approximately 400% in eight years, or about 50% a year, does not compare with any inflation figures either in Australia or overseas. Increases like this have made brass imports an investor's dream and a modeller's nightmare. Why is it that a 79 class diesel shunter which originally sold for about \$110 suddenly became available in some outlets for about \$70. Hobby shops can't be that affluent that they can afford to be charitable.

Can we, the ordinary modeller, have an explanation from an importer to clarify and justify the high price of brass and explain, not excuse, the fact that most imported brass locos have some glaring fault. If it is inevitable that prices should soar even further then could a series of models similar to the NWSL Spartan Series be investigated in an attempt to hold down prices.

Lack of suitable locally produced rolling stock drove me to scratchbuilding rolling stock years ago so I suppose high prices will drive me to building locos. There must be other modellers in a similar situation to me. Is there any chance that components i.e., generators, clack valves and other fittings may become available?

The big push for brass imports has been the interest created in the local prototype which is providing a steady market, for those who can afford them, and a continued promise of more models.

Finally I would like to thank the importers for taking the risks which must be involved and at least giving those who can afford it a chance to buy these models so those who can't afford them can dream.

Ian Thorpe,
Sydney.

Sir,

A group of people living in Sorrento, Victoria, have become very interested in the steam tram that ran in Sorrento between 1890 and 1920.

The group is interested in restoring and placing on display an engine of the type used. The engines were Baldwin 0-4-0 Saddle tanks. If any of your readers know of the existence of an engine of this type which is capable of restoration, I would be grateful if they would contact me at the following address: PO Box 55, Sorrento, Vic 3943.

P. R. Collins
Sorrento 3943

Sir,

Being a reader of this magazine over many issues I am always interested in any article dealing with kit building or scratch building, in particular VR prototype. I read with interest your reply to P. J. Brixey in the May/June issue and agree with you.

With the small quantity of Australian prototype kits required to meet the demand production costs, hence marketing costs, have to be high when compared with kits sourced from England or USA, but I wonder whether our local manufacturers are doing the right thing for themselves and for us the modellers.

Recently I had a discussion with the By-laws Section of the Customs Department and finished up discussing the plight of the model railway enthusiast and the high duty imposed. I was horrified to find that model railway kits, etc., are classified as toys the same as dolls, cap pistols, etc., and I stated that they are not the same. The outcome was that components such as wheels, gears and electric motor parts which our kitmakers have to import are duty and sales tax exempt if being used with parts manufactured in Australia, even as a 1 or 2 man show in a garage at home, providing the manufactured kit is for retail sale.

The Customs Department official indicated that, to the best of his knowledge, no one in Australia is claiming a By-Laws exemption for parts imported from overseas and used in Australia Prototype kits.

This could be a contributing factor to the high costs of Australian kits.

F. J. Fagaw,
Boronia West,
Vic

Sir,

I've been modelling for about two years and, so far, I'm not so good at modelling. The society I'm a member of has only met twice in the last year.

My complaint is that there is no help for beginners and I was hoping this letter would spur one of the more experienced modellers to send in some articles for beginners.

Gary Gentle,
Forbes 2871.

This is a rather common cry for help, for many beginners (or newcomers) believe that it is the duty of experienced modellers to help them. Many, in fact, expect the more experienced modeller to build the models for them. As a rule the experienced modeller (an experienced modeller is one who has learnt to, or has become, proficient in an aspect of the hobby) will try to offer help, although there is no rule that says he must. This magazine, like all others, attempts to assist all modellers, whether they are beginners or "old hands".

Unfortunately most beginners tend to ignore recommendations and completely overlook what is around them. In the model press there are books which cover, in fine detail, many aspects of basic scenery, wiring, layout design and model making; most of these are inexpensive and cover the subject far better than any magazine could ever attempt to. At AMRM we strive to always include a modelling article that caters for the inexperienced. In recent issues "Comrail Kitbash", "GM Conversion", "Modelling 4 Wheel Goods Wagons", "Modelling VR T Vans", "Modelling NSW KF Flat Cars", "Painting of Railway Models" and "The Building of a Katie" have been just a few that cater for the inexperienced modeller.

There is also another way to gain experience and that is to "have a go" at building a model. No matter if you fail for the lesson learnt is the commencement of experience. Always bear in mind that the results of early modelling will not be as good as those built by someone with many years behind them; remember "practice makes perfect".

Bob Gallagher.

Sir,

I am interested in live steam but am unsure as to what scale/gauge is used and to what is available on the market. Can you tell me where to purchase a catalogue which covers models and kits.

W. J. Bull,
79 Windsor Rd,
Red Hill 4059.

Can any reader help Mr Bull?

Sir,

I have just finished reading the May/June AMRM, issue 90 and find two interesting items.

One is a letter from Neil Cram, who placed an order for a model loco from a local supplier and did not receive it. I, too, placed an order, in 1972, with ProType for a C30 tank locomotive. I received a body kit without wheels but a motor was included. After visiting the exhibition in the Sydney Town Hall in 1976 I made enquiries about getting the mechanism to go with the body and have a letter dated 19th October, 1976 from ProType saying, as in Neil Cram's letter, that the parts will be sent "in about six weeks time." After various phone calls and accidentally meeting the principal of the company in a hobby shop in Merrylands, I still do not have the parts. It won't be long before it's October, 1978.

The other item is the interesting article by Laurie Evans for building an HO scale D55 locomotive. I think that there is enough information in this article to allow me to apply the same principles to finally put the wheels under my C30. I have also become interested in the 10 class 2-8-2 locomotives of the

South Maitland Railways and as they are based on the D50 design this article and the DATA sheet for the D53 will be very helpful. I should be able to get all the other details from the book "To Cessnock and Beyond" by Bob Driver.

I have a RIVAROSSA No 1114 tank loco which I find has a wheelbase, although slightly overscale, very similar to the D50, only the 1st and 2nd driving wheels have the wider spacing instead of the 3rd and 4th. I feel that anyone wishing to build a D50, 53 or 55, and does not have access to a lathe, that the RIVAROSSA model may be worth looking into for the mechanism, then to build the new body over it, as described.

Eddie Garde,
Blaxland 2774.

Sir,

I agree with Ray Cross of East Maitland, AMRM July/August 1978, on the 'rip off's' on brass engines and rolling stock, and other modellers have also conveyed the same feeling in conversation. This does not only apply to brass engines but to other items that we modellers buy for our hobby. There are some decent retailers who give you a fair go and those in the larger area who are out to make as much as they can. Being in the purchasing and supply area for over 21 years I have an understanding on local and overseas purchasing, of materials and their costs and currency exchange rates. As an example, a 12 BA tap from a fair-go retailer the price quoted was \$2.80 ea and the not fair dinkum retailer quoted \$5.00 each, giving a mark up of an estimated 400% besides his 20% to 25% discount he obtains from the Engineers Supplier which some of the modellers are not aware of.

I know they have to make a living and I am not condoning them making a profit but their 'mark ups' leave very much to be desired. We are their bread and butter and I think it's about time someone points out that we are awake to their rip off methods. It's time the not fair dinkum hobby suppliers lowered their prices in line with the fair dinkum ones.

I also support Ray Cross in giving every encouragement and support to the local manufacturers as Bob Gallagher and Allan Brown have said in previous issues, for if we do not support them we lose the Australian identity of model railways. Give constructive criticism to the Australian model manufacturers and not the 'knocker' attitude. Practical criticism solves improving practical problems in railway hobbying with a better product the end result.

Would one of the Australian manufacturers consider making a N.S.W.G.R. water tower and marketing it as a kit?

Ken Rudd,
Como. 2226

While not striving to take sides in this issue I believe the point of the importer of brass models should be put before the readers for it is realistic that any importer would not want to discuss his business with his potential clients.

Always bear in mind that the Australian Prototype brass model importer first has to find a manufacturer who will supply the required product and, as the market is tight, the manufacturer usually has the upper hand in any negotiations. The misunderstanding of the English language is common in Australia and no doubt in Japan. Bear in mind that the importer has to pay for the models before they leave Japan, usually indicating a lengthy overdraft at the bank, incurring interest. There is the freight cost, the custom agents costs, the 50% plus duty (excepted willingly by our government), the 15% sales tax applied upon being distributed wholesale and of course the eventual 50 to 70% mark up when the model is retailed. Despite consumer and reader indignation any person investing money has a right to expect a healthy dividend. If he gets greedy he will not be able to sell his product.

Like Ken Rudd I have been involved in many group discussions with modellers who beef about the inaccuracies and high cost of models but I have continually been dismayed that the same complainants are the first to purchase the so called high priced and inaccurate models. I believe every modeller has his right to decide what is good and bad in the hobby and the only way to dissuade the so called bad in the hobby is to refrain from purchasing his product. Sure, the supplier may eventually disappear from the scene, but so will his high priced and inaccurate product. So the answer to the problem lies in the hands of modellers.

Bob Gallagher.

Sir,

I have just finished reading the latest issue of A.M.R.M. and was very pleased with the whole layout; it had something for everybody.

As a constant reader from the first issue I would like to add my thanks to the staff who, over the years, have been able to put together a magazine the quality of A.M.R.M.

I for one realise how Bob Gallagher feels at getting little response from Australian modellers as to the efforts one goes to to prepare articles, etc, for the magazine, but he must get self-satisfaction knowing he has done a good job putting the magazine together, and, although very little is said from the

modellers, will keep doing it for as long as he can.

Thanks again Bob, staff and the many contributors who produce an Australian magazine for Australian modellers.

Ellis Thornley,
Elanora Heights 2101.

Sir,

I feel constrained to write as a result of comments in the July/August issue of A.M.R.M. This was a reply to a letter from Mr McNamara. The reply implied that because readers do not inundate the editors of A.M.R.M. with mail, they are therefore apathetic and unappreciative. These same sentiments have been expressed many times before by the same editor.

Let us turn meditative for a minute and consider why people buy magazines. To relax. To see pictures. To read. Right? Write? Wrong! People do not expect to have to participate in most of the things around them — when did you last write to Telecom about how wonderful your phone is? But you do appreciate it all the same, don't you? Likewise, are readers seriously expected to bombard their local newspaper, Women's Weekly, Readers Digest, etc, etc, telling them how whoopee they are? Then why should AMRM expect their readers to constantly write, when most people feel distinctly uncomfortable behind a pen?

I believe the point needs to be clearly made that 'feedback' from listeners, viewers, readers or what have you almost never reflects the views of the 'silent majority'. Usually it is only the extremists, or extra keen individuals, who react. (And so, small groups of wowsers are able to give the impression of 'massive complaint' when a programme of acceptable standards to the majority is shown on TV).

The excellent contributions of such thorough and public spirited individuals as Ross Hurley, Clive Huggan, Phil Curnow and many others are without doubt greatly appreciated by all the readers. The magazine now is of an incredibly high standard, and much praise to all concerned (especially the Managing Editor) for making it so. Most people, however, are not happy writing letters or articles and do not have to really expect such an obligation when reading their favourite magazine.

In summary then, keep your morale up editor! Just because we don't all write doesn't mean we're lazy or unappreciative. It's a great magazine... but we don't like writing.

J. Dixon,
Pt. Augusta 5700.

Despite Mr Dixon's comments, even if they reflect the thoughts of the majority, letters from readers do have a strong effect in influencing the style and presentation of A.M.R.M. You see, the Australian MODEL RAILWAY magazine differs vastly from most other magazines in that it is completely prepared by voluntary unpaid staff. (I know, you have heard it all before, but most readers give a distinct impression of being ignorant of the fact when they contact A.M.R.M. office). Each and every task (up to the printing) is accomplished as a labour of love and we tend to look upon letters from readers for many reasons, most of them having a strong influence in keeping the magazine in publication. Readers' letters also give a guide to what they like to read; their likes and dislikes; some give us inspiration to continue or provide ideas for future articles or debate another viewpoint to that published, and some (like this one) show that many are completely missing the point of our problems and do not care much for the eventual result. Sure we like to know when we have done a good job and provide the reader with exactly what he wants and we likewise like to know when we are lacking or even failing to cover a subject we have omitted. Despite thoughts to the contrary we at AMRM are not walking encyclopaedias and do need a guidance from readers to give our writing balance. I am sure readers would quickly tire of A.M.R.M. if they had to read only the pure thoughts of any of our authors.

When you study the figures of the number of letters written to award an author the author's award compared with the number of magazines sold there is very little choice than to conclude that most readers are apathetic to the magazine. You see, it is usual for less than 20 readers to participate in the reader's award, out of over 6000 local readers.

There is little doubt that Mr Dixon is correct in stating that readers do not have to join in and contribute, but all must bear in mind that A.M.R.M. is vastly different to most magazines in that it relies heavily upon its readership for support, encouragement and inspiration, and readers must be warned that if this anti-participation mood spreads throughout the whole readership the day will quickly come when A.M.R.M. will be an object of the past.

Bob Gallagher.

Sir,

I made the pilgrimage to Canberra and I would like to say thank you to the organisers for putting on a good show. If I could make one suggestion: The protective barriers surrounding the layouts should be moved back a few feet to keep everything out of reach. There was one operator who was more than a little apprehensive about his scotchbuilt brass signals being molested by small pairs of hands.

Patrick Ling,
Epping 2121.

BACK ISSUES

The following issues are available subject to prior sale:-

- No. 1 — April/May 1963 (Reprint)
- No. 39 — July/August 1969
- No. 40 — September/October 1969
- No. 41 — November/December 1969
- No. 42 — January/February 1970
- No. 43 — March/April 1970
- No. 44 — May/June 1970
- No. 45 — July/August 1970
- No. 50 — May/June 1971
- No. 53 — November/December 1971
- No. 54 — January/February 1972
- No. 55 — March/April 1972

All the above are available at the price of 45c each, including post and packaging.

No. 74 — September/October 1975

Issues 71 to 74 are available at the price of 55 cents each, including post and packaging.

- No. 78 — May/June 1976
- No. 79 — July/August 1976
- No. 80 — September/October 1976
- No. 81 — November/December 1976

Issues 78 to 81 are available at the price of 65 cents each, including post and packaging.

- No. 82 — January/February 1977
- No. 83 — March/April 1977
- No. 84 — May/June 1977
- No. 85 — July/August 1977
- No. 86 — September/October 1977
- No. 87 — November/December 1977

Issues 82 to 87 are available at the price of 85 cents a copy, including post and packaging.

- No. 88 — January/February 1978
- No. 89 — March/April 1978
- No. 90 — May/June 1978
- No. 91 — July/August 1978
- No. 92 — September/October 1978

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Sir,

Having just attended the A.C.T. exhibition at the Malkara School I have just noted some aspects that please and also displeases me.

- i. The cramped nature of the access halls.
- ii. The layout of the exhibition, though fairly reasonable, suffered from a general cramped and badly planned design. e.g. The refreshment counter at the front door!
- iii. The layouts, in my opinion, were exceptionally good — having seen some of the best British and overseas layouts and comparing the availability of parts, bits and pieces, trains, etc. of overseas and Australian prototype, I believe that layouts such as 'Bargo', 'Menangle' and '(NSWGR) Western District' should be on par with the best in the world.

- iv. Despite the setbacks mentioned before, I was impressed with the down to earth professionalism and friendliness displayed by the exhibitors and reciprocated by the public alike.

In finishing, I would like to thank A.M.R.M. for a great publication and I would like to say that despite my new profession (Yeah Armour) and my interest in Wargaming, tanks, weapons, etc, I have retained my interest (or passion) in model railways and would like to appeal to any Canberra modellers that are

SOUTHERN CROSS MODEL RAILWAY ASSOCIATION

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Membership Enquiries:
P.O. Box 84,
Miller, N.S.W. 2168.

DIVISIONAL REPRESENTATIVES:

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Bald Hills, 4036.
Ph: (07) 2611512

New South Wales:

George Giralidi,
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Membership entitles you to participate in the activities of the Association, to receive A.M.R.M., our newsheet Booster. Standards, Recommended Practices and Information Sheets covering model railway practice are included in the joining kit and are issued at regular intervals.

For further details write to the secretary or contact the Divisional Representatives.

The following activities have been organised and interested modellers should contact the respective Divisional Representative for further details.

Queensland

October 7: Meeting and discussion at Jindalee.

November 11: Work on club layout at Sandgate.

December 9: Christmas party at Grovely.

New South Wales

October 14: Meeting and discussion on track planning at Epping.

November 11: Discussion on reliable rolling-stock operation at Gympie.

December 9: Christmas B-B-Q at Brooklyn.

Victoria

October 14: Meeting and running session at Croydon.

November 11: Meeting at Glen Waverly.

December 9: Christmas outing.

contemplating any VR layouts to contact me for, as an expatriate Victorian, I have plenty of first, second-hand and basic knowledge on most aspects of the system. Congratulations to the organisers of the A.C.T. display and good luck to A.M.R.M. for the fine efforts.

Staffcot C. J. Lowe,
Kadyong Company,
Corps of Staff Cadets,
R.M.C. Duntroon 2600.

Mr Lowe seems to have overlooked the fact that the A.C.T. exhibition is also a money making venture for the Malkara Special School (Handicapped Children) and any organiser with sense to extract the dollar from the unwilling pocket would position the refreshment counter (yes, very tasty home made cakes) where the visiting public would have to pass by at least three times during the visit of the exhibition. Maybe the corridors were crowded with people trying to partake some of the tasty items, like this writer did!

Bob Gallagher.

Sir,

I agree with Bradley Hinton about the argument of 'playing trains'! I run Triang/Hornby on my layout and is more or less what is required for my operations. Now there is one instance that happened last year when this guy asked me to exhibit two trains of mine and this joker (mate of his) unbeknown to me put the knockers on about the Hornby 'garbage' and my own personal feelings towards the hobby. Now this galah mouthed off (definitely a member of the rivet counter mob) that his brass and expensive

equipment was A1 compared to mine.

To each his own, but no (censored. Ed.) has the right to bluntly criticise a fellow railway modellers' creation. It is not often I put pen to paper but I feel my point should be put forward.

Good on yer' Brad!

Peter Blackwood,
St. Andrews 2566.

Here is a pime example of why A.M.R.M. has been attempting to encourage modellers to show a grown up attitude towards the model railway hobby. Two presumably full grown adults showing an infantile attitude toward each other's choice of modelling standard, an image A.M.R.M. would like to see disappear from the scene completely. Unfortunately, Peter and his knocker are not alone in the game of pitting the commercial based modeller against the brass models. Yes Peter, to each his own, but how about a little tolerance as well, for your chosen words make you no better than your knocker, do they?

There is no doubt that the model railway hobby can and will entice many more people to its ranks, especially if those of us already in the hobby can show that we are not just big kids that cannot let go of the dummy. Sure, there are many aspects to the hobby and many modellers light heartedly jib (or stir) at each other, each of course proclaiming that each other's choice is the best. As long as this 'sport' can be kept light-hearted much fun can be had between one and all, without completely denigrating one's self esteem

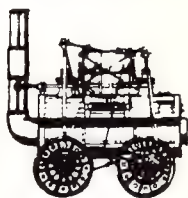
Bob Gallagher.

The advertising DEADLINE for the November/December 1978 issue is the 20th October, 1978. Please be early.

EXHIBITIONS

BOWRAL — N.S.W. October 7th, 8th, at the Bowral High School, Park Rd Bowral in conjunction with the Bowral Tulip Festival. Admision 60/30c. Parties interested in exhibiting should contact Denis May (048) 61 2317 after 3pm.

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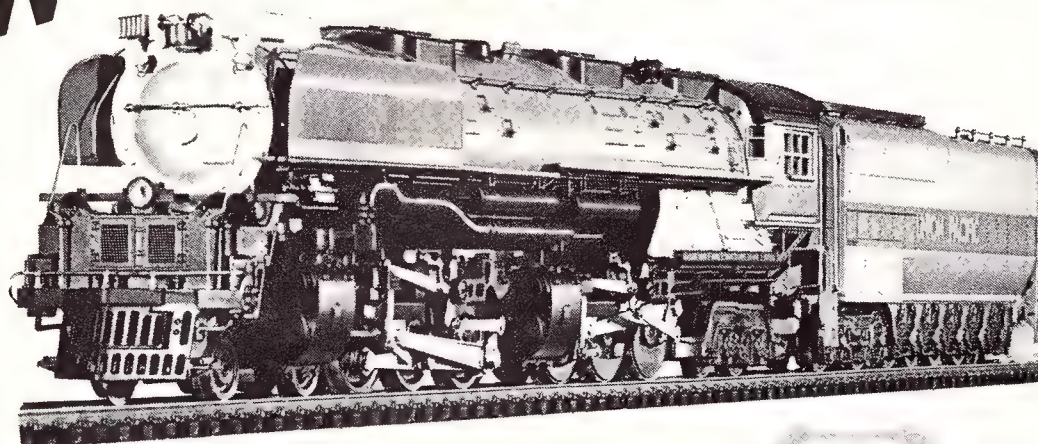
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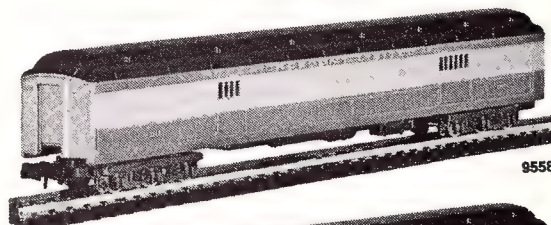
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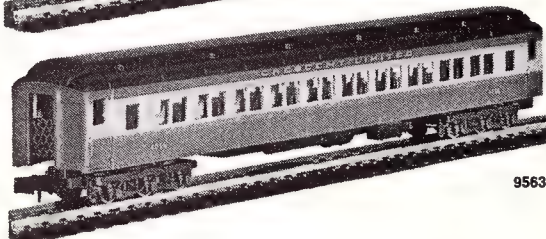
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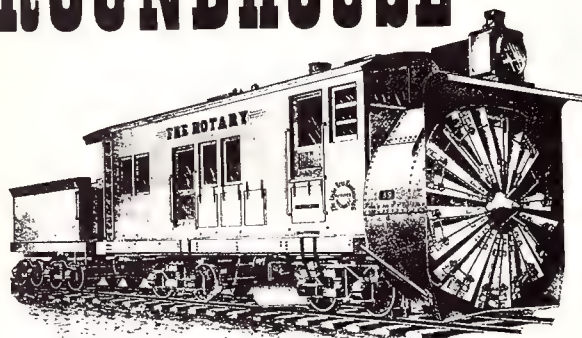
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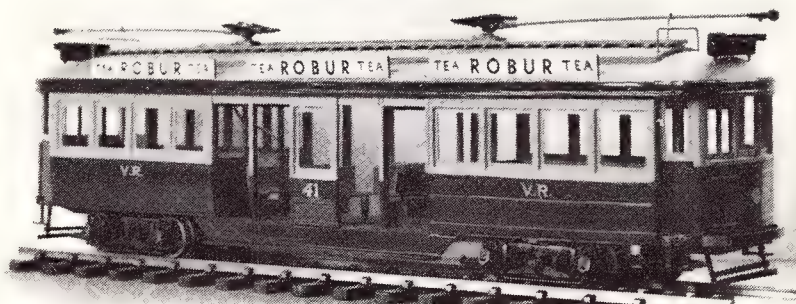
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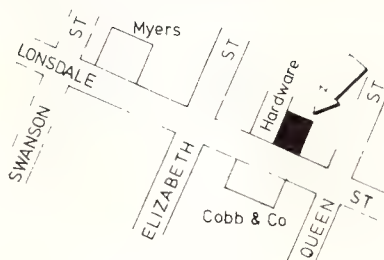
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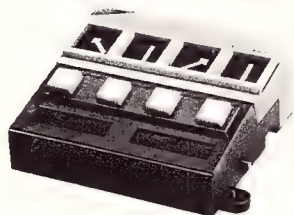
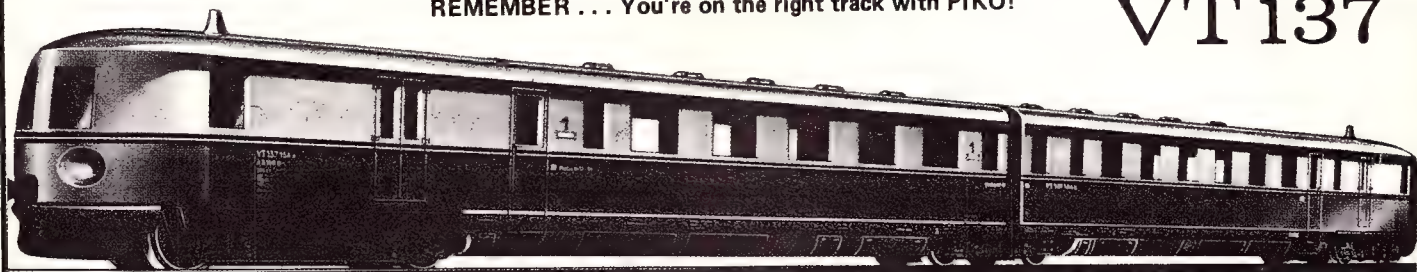
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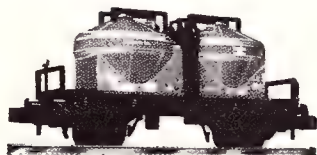


399/51 switch block with acknowledgement



5/051 PIKO switch relay — double coil drive with isolating section and reply contacts.

190/EM 14/4 Model of a two-piece railcar, length: 450 mm, central bogie driven, front lights "white/red" changing with direction of running, interior light fittings, excellent bend movement.



5/4407 Model of the DR cement truck.

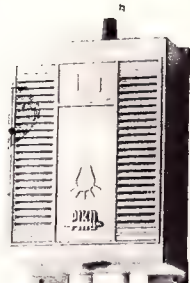
The model railway running will be still more realistic — PIKO's Lux Constant keeps the lights burning in your trains!

5/7000 Light-fitting generator L 1 „Lux Constant“ enables:

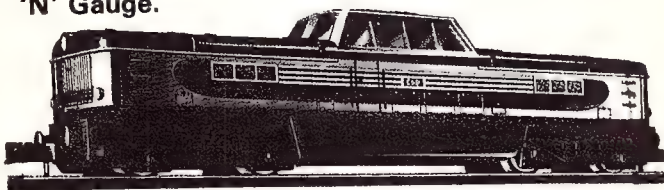
Train lighting independent of the operating voltage! Suitable for model railways of all gauges, also for car-racing tracks. Input voltage: 16 V. A.C., current input 1,5 A with maximum charge, output voltage: approx. 15 V. — up to 30 mini-lamps of 16 V. and 0,05 A can be connected!

5/7001 Choke-coil L 11 — to be included into the operating current supply line in order to avoid a short circuit of the lighting-voltage through the transformer.

5/7002 Coupling condenser for transmitting the lighting-voltage over all the isolating points.



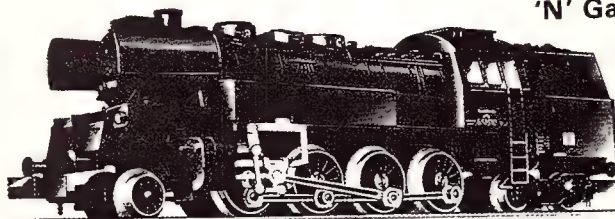
'N' Gauge.



5/4106 Model of the Diesel engine T 449 of CSD

Axle arrangement B'B', length: 110 mms. Exact make of all details, colours and inscriptions. Both bogies are driven. Great tractive power by help of lead ballast.

'N' Gauge.



5/4103 Model of the passenger train tender engine BR 65 of the DR
Axle arrangement 1'D2', length: 110 mms. Exact make of all details, colours and inscriptions. All pairs of wheels are driven. Great tractive power by help of lead ballast.

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Station Buildings and Platforms

By John H. Thomas

Some years ago I was in northern Queensland and saw what must be the simplest form of railway station it is possible to have. At several places where a road crossed the railway there was a post set in the ground on which was painted the words "Train Stop No. . . Signal Driver" or something to that effect I just can't be sure of the exact words. Catching a train was exactly the same as catching a bus.

Railway platforms can vary from the non-existent up to the longest which in Australia is just over 750 metres long and will be found at Port Pirie in South Aust. Albury platform which is the longest in New South Wales is about 456½ metres long while Sydney No. 1 at which the "Indian Pacific" arrives and departs is 370 metres long.

Generally railway platform lengths are governed by the length of the trains which stop at them. A busy main line town or city will have a platform long enough to hold the long distance expresses which serve the town. Lesser towns along the track will have shorter platforms more suited to the lengths of the shorter trains which serve them. Other localities which generate little traffic will have platforms only a few metres long with perhaps a simple shelter erected thereon for use in inclement weather.

Station building range from a simple utilitarian weather shelter to the highly ornate multi-storey edifice of the Victorian era. Modern railway architecture follows a more austere pattern and the buildings are usually functional rather than decorative.

The railway stations in many towns were built in earlier days so that many places have a railway station that is much more imposing than present traffic would warrant. Sections of the buildings no longer in use are just locked off empty or used for storage purposes. Many of these buildings have an appearance of neglect as current revenues do not justify the expense of non-essential upkeep.

Most passenger railway stations do at least three things - they provide a place where people can buy tickets to travel on trains, they provide shelter from the weather while people wait for trains and

the usual conveniences.

Where traffic and revenue do not justify it, ticket sales may be suspended or only operated for set times before a train is due.

A simple station employing one man would be comprised of two rooms - a ticket office and a waiting room plus the usual conveniences.

Larger population centres in addition to providing passengers for the railway will also provide another source of revenue in the form of parcels traffic. The station may then need a parcels office and one or two more staff. With increased staff will come a need for a station masters office. With more passengers will come the need for a book stall and so on. In large stations where there are always people moving about there will be railway refreshment rooms where meals etc. can be obtained. To a large extent refreshment rooms on country stations have been replaced by dining cars and buffets on the trains which serve these stations.

The larger stations in major cities and towns provide a number of additional service and facilities. There will be shops, hairdressers, dry cleaners, showers, a valet service, a cloak room where luggage can be left and so on.

On the model railway layout certain things must be taken into consideration. Generally the length of the trains which can be run is limited by the length of the platforms of the stations at which they are to stop. Whilst it is not unknown for it to happen in the prototype it does look a bit silly for an eight carriage train to stop at a platform which is only three carriages long. Where space does not permit long platforms it is best that trains be made up of short coaches and short locos as this looks much more like a real train than does a couple of long bogie coaches behind a large pacific loco.

The size of the station buildings will depend largely on the size of the town they are meant to serve. A large city will have a large station whilst a small country village will only have a short platform and may or may not provide accommodation for station staff.

Model railway platforms should have adequate width so that passengers do not appear to be crushed between trains and buildings and do not look as though they will be pushed off onto the rails every time a porter wheels a barrow along the platform. There will be luggage, weighing machines, automatic vending machines, notice boards, bookstalls, telephone boxes, boxes and so on, scattered about the platform. What of the reason for the platforms and the station buildings - the paying customer. Without him the scene cannot be complete. The passengers will be young and old, tall and short, thick and thin, the well dressed and the shabby and what of the staff that serve them, the station master, the porter, the guards on the trains, the train drivers, the men who work on the tracks etc. etc.

A station of more than one platform would almost certainly have a footbridge or a subway giving pedestrian access to both platforms, although there are many stations where access is by level crossing.

The use of advertising signs does wonders to relieve the bareness of the model railway scene. Care should be taken as there are some places where advertising signs are not likely to be found. They are not usually found on signal boxes or tunnel mouths etc., nor are they likely to be found in places where they cannot be readily seen by the travelling public.

Other items to consider are water columns for passing steam locomotives, level crossings of old sleepers for station staff, barriers at ticket collecting points, platform seats and so on.

A visit to a railway of the type you wish to model will give you a wealth of ideas of the things which should be included in your station area and its buildings.

Following are some of the lines available from the AMC range of distributed products which will help you in your search for a realistic station on your layout.



HO/00 - \$2.50

MERTEN FIGURES & ANIMALS

N - \$2.25

CAV'NDISH

ADVERTISING SIGNS AND POSTERS

Whilst nominally for HO/00 these signs can be used for all gauges. A small sign in HO/00 is a larger sign in N and so on.

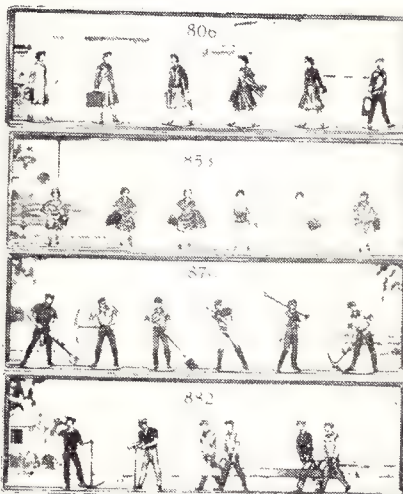
8752 Sheet of 48 posters in full colour, 8" x 6" Per sheet .. .75

8753 Sheet of 41 posters in full colour, 5½" x 4" Per sheet .. .55

8754 Sheet of trade signs in full colour, Jeweller's clock, estate agent etc. Per sheet .. .75

8755 Sheet of Poster Ads in full colour. Per sheet ..

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- 800* 6 Railway & Refreshment Room Staff
- 806* 6 Ladies walking, carrying bags
- 810* 3 Men & 3 Ladies walking with bags
- 812* 5 Men walking, carrying bags
- 818* 3 groups of 3 tourists
- 820* 2 groups of 3 tourists
- 853* 6 ladies individually seated
- 855* 3 ladies & 3 men seated
- 859* 6 men individually seated
- 865* 2 groups of 3 seated
- 867* 3 groups of 2, seated
- 870* 6 workmen with picks, shovels etc.
- 876* Track Crew with sleepers
- 882 6 track crew, 4 carrying sleepers
- 886 6 track crew with length of rail
- 908* Platform Staff - 5 men, 1 woman
- 914* Station Staff & Policeman with dog

* These numbers are available in both HO/00 and N gauge. Numbers are preceded by 'N' for N gauge. Other numbers are for HO/00 only.

FOR FULL LISTING OF MERTEN FIGURES AND ANIMALS SEE AMC PRICE LISTS SERIES "M"

Station Buildings and Platforms

VOLLMER HO/00

3506 Old Time City Station 343 x 147 x 153mm	---	---	---	---	---	\$18.95
3507 Smaller Version of 3506 - 242 x 147 x 153mm	---	---	---	---	---	\$15.50
3508 Old Time Town Station 418 x 127 x 153mm	---	---	---	---	---	\$19.50
3509 Village Station 210 x 134 x 77mm	---	---	---	---	---	\$ 9.50
3520 Modern Suburban Station - building, platform & signal box	---	---	---	---	---	\$14.95
3530 Modern Metropolitan Station 634 x 140 x 102mm	---	---	---	---	---	\$19.95
3532 Passenger platform with awning 621 x 48 x 70mm	---	---	---	---	---	\$ 7.95
3533 Lighting Set for 3532	---	---	---	---	---	\$ 9.95
3534 Passenger Platform 368 x 51 x 70mm	---	---	---	---	---	\$ 6.75
3535 Lighting Kit for 3534	---	---	---	---	---	\$ 6.50
3537 Passenger Platform with curved ends	---	---	---	---	---	\$ 6.50
3538 Platform with canopy 1100 x 48 x 70mm	---	---	---	---	---	\$11.95
3540 Modern Suburban Station 368 x 140 x 102mm	---	---	---	---	---	\$14.95
3550 Modern Branch Line Station 267 x 140 x 70mm	---	---	---	---	---	\$11.95
3559 Passenger Platform with canopy 1120 x 48 x 70mm	---	---	---	---	---	\$12.95
3560 Station Building "Baden Baden" 780x160x200mm	---	---	---	---	---	\$37.50
3561 Station Building "Nordstadt" 540 x 160 x 160mm	---	---	---	---	---	\$19.95
3600 Old Time Branch Line Station 236 x 154 x 127mm	---	---	---	---	---	\$14.95
3605 Restrooms for 3600 - 154 x 115 x 77mm	---	---	---	---	---	\$ 5.50
6060 Crates & Barrels etc.	---	---	---	---	---	\$3.50
6061 Luggage - includes suit cases, umbrellas etc.	---	---	---	---	---	\$3.75

SUPERQUICK MODEL KITS

HO/00



A-10

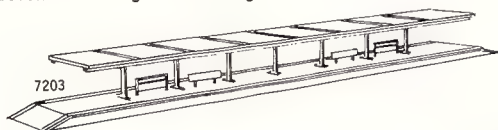


A-1 Station Platform (Side) 610 x 51mm	---	---	---	---	---	\$2.25
A-2 Side Platform Building 146 x 57 x 57mm	---	---	---	---	---	\$2.25
A-3 Island Platform 610 x 63mm	---	---	---	---	---	\$2.25
A-4 Island Platform Building 356 x 25 x 57mm	---	---	---	---	---	\$2.25
A-10 Large Terminal Station Building with side buildings etc. 195 x 160 x 180mm	---	---	---	---	---	\$4.50

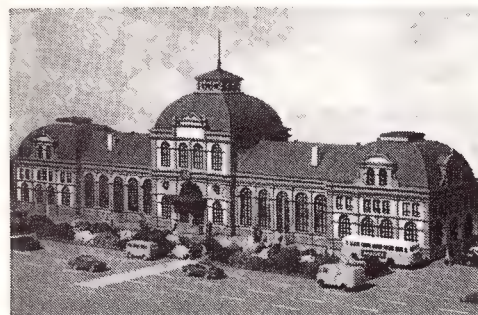
S.N. mouldings

PLASTIC KITS IN N

7202 Station Kit, 380mm long	---	---	---	---	---	\$1.25
7203 Island Platform with canopy, name boards etc. 500mm	---	---	---	---	---	\$2.50
7211 Large Station with canopy, sky lights & ramps 662mm	---	---	---	---	---	\$3.50
7216 Station with booking office & waiting room 510mm	---	---	---	---	---	\$3.25
7217 Station Building and awning	---	---	---	---	---	\$2.00



7203



HO/00
3560

N

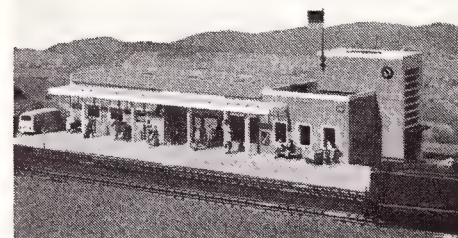
7505



HO/00
3559

N

7504



HO/00
3540

VOLLMER N

7500 Metropolitan Station 445 x 130 x 78mm	---	---	---	---	---	\$19.95
7503 Unadorned Luggage Platform 460 x 15 x 4mm	---	---	---	---	---	\$ 3.25
7504 Passenger Platform with canopy 650 x 35 x 40mm	---	---	---	---	---	\$ 8.95
7505 "Baden Baden" Station Building 780x160x200mm	---	---	---	---	---	\$27.50
7506 "Aldstadt" Station Building 330x115x135mm similar style to "Baden Baden" but smaller	---	---	---	---	---	\$13.50
7510 Branchline Station 152 x 128 x 78mm	---	---	---	---	---	\$11.75
7520 Modern Suburban Station	---	---	---	---	---	\$12.95
7521 Country Station	---	---	---	---	---	\$ 7.95
7525 Platform with awning, 3 sections	---	---	---	---	---	\$ 5.95
7527 Platform with awning, 1 section	---	---	---	---	---	\$ 3.75

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6259 Single Lamp plain post 60mm high	---	---	---	---	---	\$4.25
6261 Single Lamp plain post 90mm high	---	---	---	---	---	\$4.25
6262 Double Lamp plain post 80mm high	---	---	---	---	---	\$6.50
6269 Single Gooseneck Lamp 125mm high	---	---	---	---	---	\$3.25
6270 Double Gooseneck Lamp 125mm high	---	---	---	---	---	\$4.50
6271 Single Gooseneck Lamp 50mm high	---	---	---	---	---	\$4.25
6277 Single Gooseneck Lamp 180mm high	---	---	---	---	---	\$3.50

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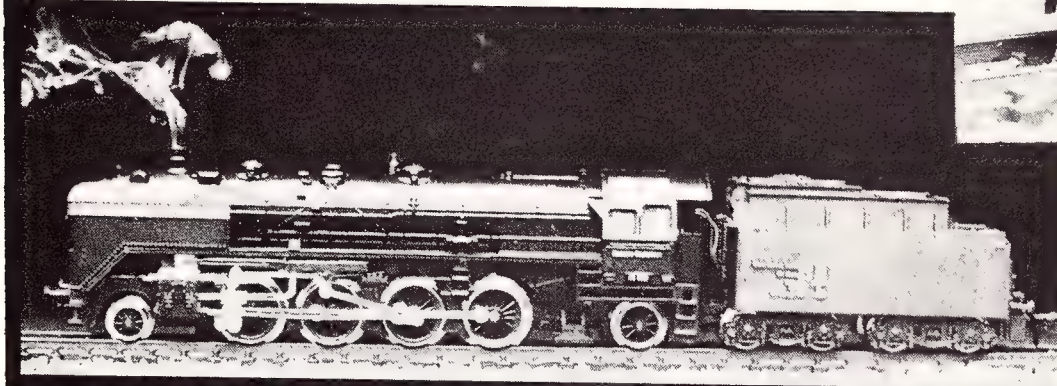
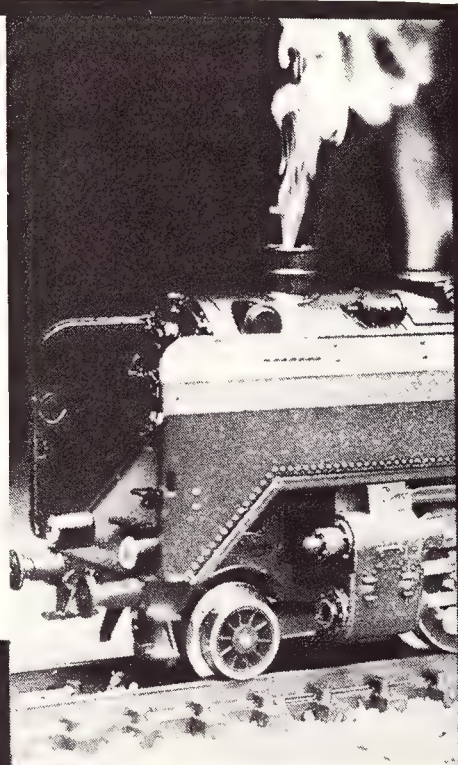
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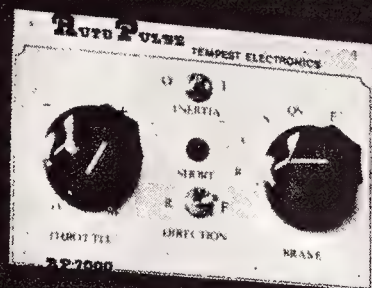
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Ron Preston was one of the earlier band who set out to record steam before it passed. This book is the result of twenty years of steam photography, on busy main line and distant branch. It covers the years 1953 to 1972 and in the pages are the results of his many journeys around the system. In all, some thirty-two classes of steam locomotives are illustrated but, if variations within the class are allowed, the count is closer to forty. To avoid repetition, technical details of the engines involved are tabulated at the end, while a map of the system shows the location of each of the one hundred and fifty photographs.

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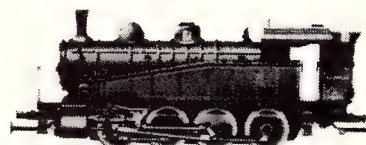
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Further problems have arisen with the result of both delaying initial limited production and the later return to normal levels. We can only request customers to have patience with us while the bugs are sorted out.

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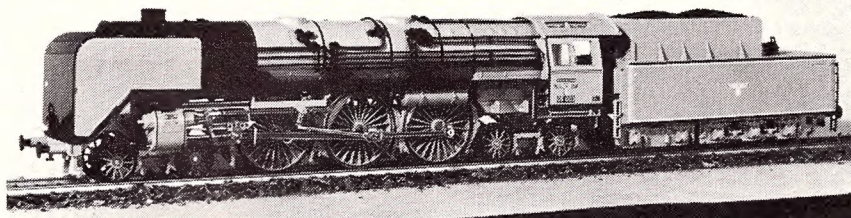
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Continued from page 27.

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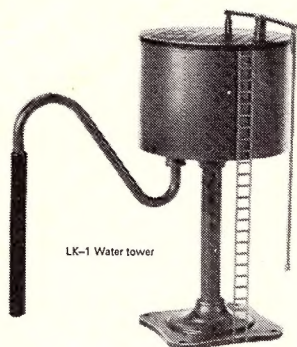
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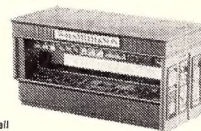
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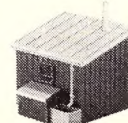
PECO



LK-6 Bookstall



LK-5 Coal office



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HO/00

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SCALE 7mm = 1ft - Gauge = 16.5mm

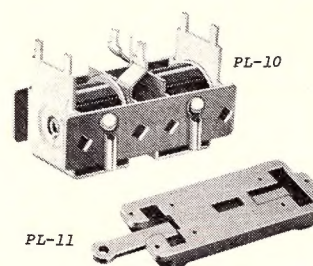
OR-10 2-ton Mineral Wagon Kit	7.00
OR-11 2-ton Flat Wagon Kit	5.25
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SL500X Flexible Track, 16.5mm N.G. with nickel silver rail	
906mm (1yd.)	2.50

00-9

FLEXIBLE TRACK - 457mm (18 inches) long	
SL-400X Wood grained sleepers & nickel silver rail	1.15

POINTS & ACCESSORIES	
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SL-492X Left Hand Point	4.95

(Use N gauge rail joiners SL-310X metal, SL-311 insulated)



PL-11

PL-10

PECO ELECTRICS

PECO "ELECTRICS" - Items for use with all gauges.

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PL-11 Adaptor Base for PL-10	.75
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PL-17 Probe for Point Operation	1.50
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PL-40 Wheel Cleaning Brush, Scraper	3.50
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LK-22 Weighing Machines (4)	1.00
LK-23 Milk Churns (24)	1.25
LK-24 Packing Cases (6)	1.25
LK-25 Platform Seats (12)	1.50
LK-45 Flexible Field Fencing	1.50
LK-46 Field Gates, Stiles & Wicket Gates	1.50

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